Smart Syllabus 2020-2021

COMPUTER SCIENCE

Intermediate Part-II

CHAPTER WISE SOLUTION OF 9 BOARD SESSION 2012-2019

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CONTENTS

OBJECTIVES (MCQ'S) OF CHAPTER-1 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. A collection of raw facts and figures is called: **(3 Times)**
(A) data (B) information (C) processing (D)object

2. Which of the following may be a temporary file? **(2 Times)**
(A) master file (B) transaction file (C) backup file (D) none

3. SQL stands for: **(4 Times)**
(A) structure query language (B) sort query language
(C) self query language (D) seek query language

4. A database consists of various components called:
(A) properties (B) tool (C) object (D) entities

5. Which one of the following type of file requires largest processing time? **(3 Times)**
(A) Sequential file (B)Random file (C) indexed Sequential file (D) Direct Access file

6. Which represent a collection of concepts that are used to describe the structure of a database? **(2 Times)**
(A) data ware house (B) database model (C) data structure (D) data type

7. A relation that contains minimal redundancy and allow easy use is called: **(2 Times)**
(A) clean (B) record (C) field (D) well structured

8. Each set of related items in a table is called:
(A) Table (B) Record (C)field (D) query

9. The manipulated and processed data is:
(A) Object (B)Data (C)Figure (D) information

10. Which of the following data model is more flexible: **(2 Times)**
(A) NETWORK model (B) Hierarchical model (C) Relational model (D) Object data model

11. Data that causes inconsistency lacks: **(2 Times)**
(A) Good data (B)Data Integrity (C) Data redundancy (D) Data anomaly

12. Which of the following is not a database object?
(A) table (B) query (C) form (D) MS-Word

13. Manipulation of data to achieve the required objectives and results is called:
(A) Data processing (B) Operation (C) a and b (D) None

14. Storage and retrieval of data is related to:
(A) Data capturing (B) Data Manipulation(C) Managing output result(D) None

15. All records in a file have the same:
(A) Contents (B) Structure (C)Both a and b (D) None

16. SQL is a(n): **(3 Times)**
(A) Unstructured language (B) Structural language
(C) Object oriented language (D) Software

17. The type of files from functional point of view include:
(A) Program files (B) Data files (C) a and b (D) None

18. Which of the following is handled by DBMS?
(A) Data integrity (B) Data security (C) Data independence (D) All

19. Database application contains procedure for:
(A) Adding records (B) Deleting records (C) Processing queries (D) All

20. Which of the following database model is often referred to as an Inverted Tree?
(A) Hierarchical (B) Network (C) Relational (D)object-oriented

21. A set of related records that represent a unit of data is **(2 times)**
(a) file (b) record (c) field (d) database

22. The column of table corresponds to: **(1 times)**
(a) table (b) record (c) field (d) cell

23. A logical grouping of characters is a: **(3 times)**
(a) field (b) record (c) File (d) Database

24. MS Access save the database with the extension. **(1 times)**
(a) .mdbq (b) .msdb (c) .ppt (d) .mdb

25. A collection of related fields is:-
(a) Character (b) File (c) Record (d) Database

26. Duplicate data in multiple data files is called:
(a) data integrity (b) data consistency (c) program dependency (d) data redundancy

27. Each separate piece of information stored in a record is called:
(a) form (b) field (c) table (d) relation

28. Which file is used to store information that remains constant for a long time:
(a) data file (b) master file (c) transaction file (d) backup file

29. A set of related files created and managed by a (DMBS) is called:
(a) Field (b) Record (c) Database (d) Module

30. Multiple copies of the same data is referred to as:
(a) data integrity (b) data inconsistency (c) data redundancy (d) data isolation

31. Which of the following is also known as data set:
(a) record (b) field (c) file (d) module

32. a type of file that contains data is called:
(a) data files (b)Program file (c) image file (d) Query file

ANSWERS

1	2	3	4	5	6	7	8	9	10	11
A	B	A	C	A	B	D	B	D	C	B
12	13	14	15	16	17	18	19	20	21	22
D	C	C	B	B	C	D	D	A	A	C
23	24	25	26	27	28	29	30	31	32	
A	D	C	D	B	B	C	C	C	A	

SHORT QUESTIONS OF CHAPTER-1 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. What is meant by Data Independence? **(2 Times)**

Ans: Data independence means that data and application programs are separate from each other. The user can change data storage structures and operations without changing the application programs and can also modify programs without reorganization of data. The user can also modify programs without reorganization of data.

2. What do you mean by Data Integrity? **(4 Times)**

Ans: Data integrity means the correctness and consistency of data. It is another form of database protection. Integrity is related to quality of data. It is maintained with the help of integrity constraints.

3. What is meant by Database? **(2 Times)**

Ans: A database is a collection of logically related data sets or files. Each file may contain different type of information and are used for specific purposes. The files may be organized in different ways to meet different processing and retrieval requirements of the users.

4. What is data processing?

Ans: The process of manipulating data to achieve the required objectives and results is called data processing. The software (program) is used to process raw data. The software converts raw data into meaningful information.

5. Enlist different types of database models. **(2 Times)**

Ans: The different types of database models are as follow:
i. Hierarchical model ii. Network model iii. Relational model

6. What is the concept of Consistency constraints? (2 Times)

Ans: Consistency means accuracy of data. Constraints are rules or requirements that implements in database management system. Consistency constraints are the rules that must be followed to enter data in the database. If a data does not fulfill these constraints, it cannot enters to the database.

7. Write two advantages of DBMS.

Ans: Some advantages of DBMS are;

i. Data independence:

DBMS provides the facility of data independence. It means that the data and application programs are separate from each other. The user can change data storage structures and operations without changing the application programs. The user can also modify programs without reorganization of data.

ii. Data security:

DBMS provides the data security. It is the protection of the database from unauthorized access. DBMS provides several procedures to maintain the data security.

8. Define the term redundancy.

Ans: Redundancy is a system design in which a component is duplicated so if it fails there will be a backup. It has a negative can notation when the duplication is unnecessary or is simply the result of poor planning.

9. What is Backup file?

Ans: A type of file that is used to take backup important data is called backup file. If data is lost it can be recovered from backup file. Special programs are used to create, and use backup files.

10. Name different types of file organization.

Ans: Types of file organization are as follows:

i) Sequential file organization.
ii) Heap file organization.
iii) Hash file organization.
iv) B+ file organization.
v) Indexed sequential access method (ISAM).
vi) Cluster file organization.

11. State the use of query language. (3 Times)

Ans: SQL (Structure Query Language) is used for creating table structures, entering data into them and retrieving/updating the selected records, based on the particular criteria and format indicated, within the databases.

12. State the use of Index in FMS. (2 Times)

Ans: Index are used to maintain the data in order. The order can be ascending or descending. Index is a value in fact which is known as key value. On the basis of that key value, order of data is maintained. On the basis of that index, data is retrieved and inserted.

13. Why File Organization is important in a database Design? Give two reasons. (2 Times)

OR What do you mean by File organization?

Ans: The technique for physically arranging the data on secondary storage like hard disk etc is called file organization. It is necessary because it tells the order in which data will be maintained on disk and how it will be represented when it is inserted and retrieved. If a good file organization will be used then data access and insert process will be fast.

14. What is data dictionary? OR use of Data Dictionary (4 Times)

Ans. Data dictionary is a file that is used to store data definitions or description of structure of data used in database. It may also monitor the data that is used. It is also called repository.

15. Name four database objects......

Ans. i) Data ii) Hardware iii) Software iv) Personnel

16. Describe term information? (3 times)

Ans. Processed data is called information. It is also known as output. It is used to make decisions.

17. List any two objectives of DBMS.

Ans. i) Shareability ii) Availability (iii) Evolvability (iv) Data integrity

18. List two advantages of file indexing? (2 times)

Ans. i) Index always refers the exact location on disk. ii) It is fast than sequential method.

19. Define data inconsistency?

Ans. Inconsistency means that two files may contain different data of the same entity. For example, the address of a student must be updated in all files if any change occurs. It is possible that it is changed in Student file but not in Library file. The data becomes inconsistent in this situation.

20. What is the purpose of backup and recovery? (4 times)

Ans. Backup means to store an additional copy of data. The data can be recovered from this file if the original files are mostly created by using specific software utilities.

21. Define data?

Ans. Raw facts and figures is called data. It is unprocessed (i-e collect information of student from admission form).

22. Any two differences between file processing and database approach?

Ans.

File Processing	DB approach
i) in file processing, data may be duplicated in different files that cause data redundancy.	i) Here data is not duplicated and appears only once.
ii) It is difficult to apply integrity checks on files.	ii) It provides many constraints of data integrity.

23. Define data file.

Ans: A type of file that contains data is called data file. Data files are created by the software being used. For example Notepad s a type of text file with extension .txt.

24. List any two file types from usage point of view. OR Files names from usage point of view. (2 times)

Ans. The types of files from usage point of view are as follows:

i. Master File ii. Transaction File iii. Back up File

25. List any two problems in traditional file approach.

Ans. i. Data redundancy ii. Data inconsistency

iii. Integrity problems iv. Security problem

26. Define data manipulation.

Ans. The process of applying different operations on data is called data manipulation. It includes the following operations:

a. Classifying b. calculation c. sorting d. summarizing

27. Describe network model.

Ans. Each record in this model is called a node. A higher level node is called parent and lower level node is called child. The child node can have more than one parent nodes. The child nodes are represented by arrows in this network.

28. What is the use of DML?

Ans. DML stands for Data Manipulation Language. It consists of SQL commands that are used to load update, query and the database using SELECT Commands. DML Commands include INSERT, UPDATE and DELETE.

29. List three examples of database system.

Ans.
i. Library Management System.
ii. School Management System.
iii. Account Management System.

30. Write shortcut key to compile and run C program. (1+1)

Ans. i. Compile → Alt+F9 ii. Run → CTRL+F9

31. What is database system? OR What is the purpose of database system? (2 times)

Ans. It is a collection of data as well as programs required to manage that data. It is a computerized record keeping system. Its purpose is to maintain data and provide it to the user when it is required.

32. Why do people use database?

Ans. People use database to retrieve the data quickly and easily. Database can store large amount of data efficiently. It allows the user to display and distribute data in many ways.

33. Difference between database and database management system. (2 times)

Ans.

Database	DBMS
A collection of related data is called database.	A collection of programs to create and maintain databases is known as database management system.

34. What is the use of DDL?

Ans: DDL stands for Data Definition Language. It consists of SQL commands used to define a database, creating tables, indexes and views. Some important commands of DDL include CREATE/DROP TABLE, ALTER TABLE, CREATE/DROP VIEW etc.

35. Differentiate between data redundancy and data inconsistency?

Ans:

Data redundancy	Data inconsistency
Data redundancy means the duplication of data in multiple files that causes wastage of storage.	Data inconsistency means two files may contain different data of the same entity.

36. Why is report generator used in database system?

Ans: Report generator is used to produce reports. It retrieves data from database and displays it in different formats. The user can use report generator to format page number, dates, titles and column headings etc.

37. Why is it important to specify data type and size of a field?

Ans: The data type of a field specifies the type of data that can be stored in the field. A field size defines the maximum number of characters that can be stored in a field.

LONG QUESTIONS OF CHAPTER-1
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. List two examples of database system? **(2 Times)**
2. Define database system. Explain any three components of database system. **(3 times)**
3. Explain database management system. Discuss any three advantages of DBMS **(2 Times)**
4. What is a File? Explain three types of Files from usage point of view.
5. Briefly describe the four advantages and four disadvantages of database management system? **(4 Times)**
6. How a table/ relation is formed up in DBMS? Write down the properties of relation in detail.

OBJECTIVES (MCQ'S) OF CHAPTER-2 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. **A relation is also known as:** **(6 Times)**
(A) table (B) tuple (C) relationship (D) field
2. **A table must have:** **(7 Times)**
(A) primary key (B) secondary key (C) composite key (D) sort key
3. **A relation is analogous to a :**
(A) row (B) field (C) record (D) file
4. **Which of the following is not included in the definition of entity:**
(A) person (B) object (C) concept (D) action
5. **No. of primary keys can exist in a table:**
(A) one (B) two (C) three (D)four
6. **Which of the following key does not hold uniqueness property?**
(A) candidate key (B)foreign key (C)primary key (D)secondary key
7. **Which one of the following is used to associate entities with each other?**
(A) attribute (B)relationship (C)entities (D) cardinals
8. **Foreign key is found in:** **(2 Times)**
(A) parent table (B) dependent table (C) pivot table (D) index table
9. **The selected candidate key is called:**
(A) primary key (B) foreign key (C) super key (D) composite key
10. **DBA stands for :**
(A) Database Administrator (B) Data basic Administration
(C) Database Application (D) Database authority
11. **A two-dimensional table of data is called:**
(A) Group (B) Set (C) Declaration (D) Relation
12. **A key is :**
(A) A field that identifies only one record (B) The most important field in a record
(C) The first field of table (D) None
13. **Which of the following is NOT a good primary key:**
(A) Social security number (B) Order number(C) Zip code (D) Student ID number
14. **Which field listed below is the most appropriate primary key:**
(A) A person's name (B) A person's street address
(C) A person's birth date (D) A salesperson's region
15. **One field or combination of fields for which more than one record may have the same combination of values is called?**
(A) Secondary key (B) Index (C)Composite key (D)Linked key
16. **An attribute in a relation of a database that serves as the primary key of another relation in the same database is called a?**
(A) Global key (B)Link key (C)Foreign key (D) None
17. **Which of the following is also known as control key:** **(2 times)**
(A) Secondary key (B) candidate key (C) Composite key (D) Primary key
18. **The process of arranging data in a logical sequence is called:** **(2times)**
(a) Sorting (b) Summarizing (c) Capturing (d) Classifying
19. **Which object is used to store data in database:** **(2 times)**
(a) Macro (b) Table (c) Form (d) Report
20. **A primary key that consists of more than one attributes is called:**
(a) Secondary key (b) foreign key (c) composite key (d) sort key
21. **The columns of a relation correspond to:-** **(3 times)**
(a) Table (b) Record (c) Field (d) cell
22. **_________ is unique:**
(a) primary key (b) Candidate key (c) Foreign key (d) Secondary key
23. **Which of the following can be a primary key?**
(a) Last name (b) Salary (c) Customer ID (d) Region

24. Insert command is used to insert:
(a) A new table (b) A new record (c) A view (d) Dependencies

25. A virtual table that is constructed from other tables is called:
(a) view (b) Table (c) Relation (d) Tuple

26. Insert command is used to insert:
(a) A New Record (b) A New Table (c) A View (d) Dependencies

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13
A	A	D	D	A	D	B	B	A	A	D	D	C
14	15	16	17	18	19	20	21	22	23	24	25	26
D	C	C	C	A	B	C	C	A	C	B	A	A

SHORT QUESTIONS OF CHAPTER-2
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Define Foreign key. **(2 times)**

Ans: A foreign key is an attribute or set of attributes in a relation whose values match a primary key in another relation. The relation in which foreign key is created is known as dependent table or child table. While other table is called parent table.

2. Who is Data Administrator? **(6 Times)**

Ans: A data administrator is a person who is responsible for entire data of an organization. He normally develops the overall functional requirements for the database being used in the office. He controls and manages the whole data of database system.

3. What is the difference between Primary key and foreign key?

Ans: Primary key is an attribute or set of attributes that uniquely identifies record in a table. Foreign key is attribute or a set of attributes whose values match with primary key in another relation.

4. Define the term relation.

Ans: A relation is used to store information about an entity. It is another name of a table. It consists of rows and columns. It is defined as:
Student(name,roll_no,marks,average)
Student is name of relation/table. While name, marks average are the fields or columns of the table.

5. Define entity. **(3 times)**

Ans: An entity is anything about which you want to keep information in the database. The entity must have a unique identifier. The identifier is composed of one or more attributes.

6. What is primary key? **(2 Times)**

Ans: Primary key is attribute or set of attributes that uniquely identify record in a table. Every relation/table must have a primary key. Only a single primary key can use in a relation. It is underlined in a relation. i.e.

Reg no	Name	Address	Contact

Here reg_no is a primary key.

7. List different types of keys. **(2 times)**

Ans: i. primary key ii. candidate key iii. composite key or concatenate key
iv. alternate key v. foreign key vi. sort key vii. secondary key

8. Differentiate between primary and secondary key.

Ans:

Primary key	Secondary key
Primary key is attribute or set of attribute that uniquely identify record in a table. Every table has only one primary key.	Secondary key is non-unique attribute. An attribute or set of attributes that is basis for retrieval is known as secondary key. One secondary key value may refer to many records.

9. Define composite key. **(2 Times)**

Ans: A primary key that contains two or more attributes is called composite key. For exampl : Roll_no and Subject both attributes are used to identify each tuple in a relation.

Example:

Roll No.	Subject	Marks
1	English	52
1	Math	77
1	Computer	64
2	English	58
2	Math	69

10. Differentiate between candidate key and primary key.

Ans:

Candidate key	Primary key
A relation has more than such attributes or combination of attributes, each is called candidate key. i.e. any key that can be act as primary key is candidate key.	Primary key is attribute or set of attributes that uniquely identify record in a table.

11. Who is a database administrator?

Ans: A database administrator is an important person in the development of any database system. He is responsible for the design, implementation, operation, management and maintenance of database system. he must be a technically competent and a good manager.

12. What is Secondary Key?

Ans: A field or combination of fields that is basis for retrieval is called secondary key: it is a non-unique field. One secondary key value can be refer to many records.

13. Who is End User? **(2 Times)**

Ans: A end user is a person who use computer for his own need. He might have a moderate knowledge of computer, computer science and information technology. He does not need to know in depth knowledge of computer system.

14. Differentiate between Fixed Length Field and Variable Length Field.

Ans: A fixed length contains a predefined numbers of characters (bytes). The data cannot be exceed then the allocated length of the field.

A variable length field cannot have a predefined number of characters (bytes). It occupies the space according to the data entered by the user.

15. Write two responsibilities of a Database Administrator.?

Ans:
1. He assigns different permissions to the database users.
2. He monitors the database system and solving the different problems that occur in the DB system.

16. What is meant by data modeling?

Ans: Data modeling is the process of identifying the data objects and the relationship between them.

17. Define key?

Ans. A key is an attribute or set of attributes that uniquely identifies a tuple in a relation. They are also used to create relationship between different tables.

18. What is the basic purpose of using view? **(3 times)**

Ans. It keeps the data safe and secure from unauthorized and illegal users. Views provides descriptions of relations that are not stored but needed from stored relations. It also provides flexibility in displaying data.

19. Write three important characteristics of a primary key?

Ans:
i. A relation can have only one primary key.
ii. Each value in primary key attribute must be unique.
iii. Primary key cannot contain null values.

20. Why are keys defined in tables?

Ans: The keys are defined in tables to access or sequence the stored data quickly and smoothly. They are also used to create relationship between different tables.

OBJECTIVES (MCQ'S) OF CHAPTER-3 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Organize the database in computer disk storage is done in: (2 times)
(A) logical design (B) physical design (C)analysis (D)implementation

2. An entity related to itself in an ERD model refers to: (4 Times)
(A) recursive relationship (B) one-to-many
(C) many-to-many (D) one-to-one

3. An attribute is also known as a: (3 Times)
(A) relation (B)table (C) row (D)field

4. Cars and parts are example of:
(A) concepts (B) attributes (C) entities (D)none of these

5. The _____ ER diagram is used for: (2 times)
(A) entity (B) attributes (C) group (D)relationship

6. ______ types of relationship can be used:
(A) 2 (B) 3 (C) 4 (D)5

7. The category of data that describes an entity is (2 Times)
(A) Attribute (B) Data item (C)Record (D) tuple

8. Which of the following is used to associate entities with one another: (4 Times)
(A) Entity (B) Attribute (C)Identifier (D) relationship

9. In an E-R diagram, a rectangle represents (n) : (4 Times)
(A) attribute (B) entity (C) relationship (D) field

10. Which of following is used to define objects and describe their characteristics: (4 times)
(A) Attribute (B) Relationship (C)Both a and b (D)None

11. Which of the following is an example of one-to-one relationship?
(A) Student-RegNo (B)Person-automobile
(C)Mother-daughter (D)Person-phone number

12. Which is NOT included in the definition of an entity:
(A) Person (B)Object (C) Concept (D)Action

13. The relationship can be:
(A) One-to-one (B) One-to-many (C) Many-to-many (D)All

14. Physical database design decisions must be made carefully because of impacts on:
(A) Data accessibility (B) Response times (C) Security (D)All

15. Merge relation is important because:
(A) Different views may need to be integrated
(B) New data requirements may produce new relations to be merged
(C) Both a and b (D)None

16. All of the following components of physical database design except?
(A) Data volume and usage analysis (B) Data distribution strategy
(C) File organization (D) Normalize the Relations

17. Which of the following activities are involved in data analysis?
(A) Data Flow diagram (B) Decision Tables (C)Decision Trees (D) All

18. Which of the following is related to Modality :
(A) Optional (B) Mandatory (C) Unidirectional (D) Both a and b

19. Merging the relation is also known as:
(A) View integration (B) View entities (C) Both a and b (D)None

20. The degree of relation refers to the number of: (3 times)
(a) rows (b) tables (c) data (d) columns

21. All the hardware costs are considered during: (4 times)
(a) project planning (b) requirement analysis
(c) feasibility study (d) data analysis

22. In an E-R Diagram, a diamond represents a(n): **(4 times)**
(a) entity (b) attribute (c) relationship (d) easier programming

23. Customers, cars are examples of: **(3 times)**
(a) Entities (b) Attributes (c) Cardinals (d) Relationships

24. A database consists of various components called:
(a) Tools (b) Properties (c) Entities (d) Objects

25. Which of the following is a one-to-many relation?
(a) Mother-daughter (b) Person-Date of Birth
(c) both A and B (d) Country-Capital

26. A person name, birthday and social security number are example of:
(a) Attributes (b) Entities (c) relationship (d) Descriptors

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13
B	A	D	B	A	B	A	D	B	A	A	D	D
14	15	16	17	18	19	20	21	22	23	24	25	26
C	D	D	D	A	A	D	C	C	A	D	B	A

SHORT QUESTIONS OF CHAPTER-3 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. What is Project Planning? **(4 Times)**

Ans: A comprehensive planning and schedule must be developed to complete the project successfully. All cost factors are also taken into consideration. Different cost factors include:

- salaries of team members.
- Logistics and hardware costs.

2. List two properties of a relation.

Ans: The relationship can be.
i. One-to-one ii. One-to-many
iii. Many-to-many iv. Recursive.

3. Define an attribute. Give an example. **(2 times)**

Ans: The characteristics or properties of an entity are called attributes. An entity may have many attributes. For example Name, Address, phone No, and class are some attributes of the STUDENT entity.

4. What are Relationships? **(3 Times)**

Ans: A logical connection between entities is called relationship. The relationship indicates how entities are connected to each other. For example, there is a relationship between MANAGER and DEPARTMENT. A manager manages the department, on the other hand a department is managed by a manager. This leads to a relationship called "MANAGER and Department.

5. Define Entity or Object. **(2 Times)**

Ans: Anything that is participating in system is known as entity or object. An entity can be person, place or thing for which data is collected and maintained. i.e. teacher, student etc.

6. List two data distribution strategy.

Ans: 1. Centralized: all data is located at a single site in this strategy.
2. partitioned: database Is divided into partitions and fragments.

7. List out two types of relationship.

Ans: 1. One-to-one relationship
2. one-to-many relationship

8. Write the use of ER-diagram.

Ans: An E-R diagram is a graphical representation of entities in a database and relationships between them. It tells the basic structure of the relations of the entities and how they associate with each other. Rectangle represents entity, diamonds are used for relationships and oval is used to represent attributes.

9. Name the symbols used in E-R model for attribute and entity.

Ans: Oval shape is used for represents attributes. And rectangle is used for entity.

10. Define Modality ?

Ans: Minimum number of instances of one entity associated with each instance of the related entity. It describes the relationship as mandatory or optional. When minimum number of instances is zero, relationship is optional., Relationship is mandatory when minimum number of instances is one or more.

11. List advantages of RDBMS.

Ans: 1. Easy to use. 2. Secure. 3. Data manipulation. 4. Better integrity. 5. Provide physical data independence.

12. What is Analysis in Database? OR What is the purpose of Analysis? (3 Times)

Ans: A process of studying the existing system is known as analysis. The basic purpose of analysis in DB is to know which activities are performed in the current system. Analysis also determines what should take place in DB to make it consistent and more efficient.

13. Define Cardinality. (3 Times)

Ans: The number of entity occurrences associated with each occurrence of the related entities known as cardinality tells us that how much occurrences of the entity take place with respect to other related entity tells us the maximum number of relationships. It maybe one or many.

14. State the objective of physical database design.

Ans: The major objective of physical database design is to implement the database as a set of records, files, indexes and other data structures.

15. List any two activities involved in Data Analysis.

Ans: 1. Data flow diagram (DFD). 2. Decision tables. 3. Decision trees.

16. Give two examples of Entity.

Ans: Examples of entities are as follow:

1. **Person:** teacher, player, doctor
2. **Place:** country, city

17. Write the names of two relationship types?

Ans. i) One to one relationship.
ii) One to many relationship.

18. Difference between degree and cardinality of a relation?

Ans.

Cardinality	**Degree**
i) The number of entity occurrence with related entity is known as cardinality.	**i)** It is no. of attributes of its relation.
ii) Cardinality specifies maximum number of relationships.	**ii)** No. of associations among two or more entities.

19. State the purpose of feasibility study? OR Why feasibility study is used? (4 Times)

Ans. It is also called preliminary investigation. It is conducted to investigate the required database system. It determines whether the proposed system is affordable, possible and acceptable. It also determines whether the area of project should be first.

20. Define the term degree of a relation?

Ans. The number of entity occurrences associated with each occurrence of the related entity is known as degree of relationship.

21. Why requirement analysis is conducted?

Ans. It is conducted to collect the requirements for the project. These requirements include the possible inputs for database and required functionality of the project.

22. Identify name of entity and primary key in the following STUDENT (Student ID, St, name)

Ans. Entity ______________ STUDENT

Primary key ______________ Student ID.

23. Distinguish between Entity and Entity Instance.

Ans.

Entity	Entity Instance
Anything that is participating in the system is known as entity. An entity can be a person, place, thing or event.	A member of an entity class is known as an entity instance. For example STUDENT can be an entity class and a student Tahir can be entity instance.

24. Write any two criterias to select file organization.

Ans. The criteria to select file organization are:

i. Efficient use of storage space.

ii. protection from failure or data loss.

25. Differentiate between cardinality and modality?

Ans:

Cardinality	Modality
The maximum number of instances of one entity associated with each instance of the related entity is known as cardinality.	The minimum number of instances of one entity associated with each instance of the related entity is known as modality.

26. How is database integrity maintained?

Ans: Database integrity is maintained with the help of integrity constraints. The constraints are the rules that are designed to keep data consistent and correct. They act like a check on the incoming data. DBMS provides several mechanisms to enforce integrity of the data.

27. What is the purpose of logical database design?

Ans: The logical or conceptual model describes the data stored in the database. It contains the definition of the data to be stored in database. It also contains the rules and information about the structure and type of data. It is the complete description of data stored in database.

OBJECTIVES (MCQ'S) OF CHAPTER-4
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Different attributes in two different tables having same name are referred to as:

(A) synonym (B)homonym (C)acronym (D)mutually exclusiveness

2. The goal of normalization is to: **(2 Times)**

(A) increase number of relation (B) get stable data structure

(C) increase redundancy (D) none of these

3. In 3NF, which form of dependency is removed? **(6 Times)**

(A) functional (B) non-functional (C) associative (D)transitive

4. Two or more attributes having different names but same meaning are called: **(2 Times)**

(A) homonyms (B) aliases (C)synonyms (D) alternate attributes

5. Which of the following anomalies result from a transitive dependency:

(A) Insertion (B) Modification (C)Deletion (D) All

6. Every relation must have: **(2 Times)**

(A) Primary key (B) Candidate key (C) Secondary key (D) Mutually exclusiveness

7. A rule that states that each foreign key value must match a primary key value in the other relation is called:

(A) Referential integrity constraint (B) Key match rule

(C) Entity key group rule (D)Foreign/primary match rule

. **The attribute on the left-hand side of the arrow in a functional dependency is:**
A) Candidate key (B) Determinant (C)Foreign key (D) Primary key

. **A relation that contains minimal redundancy and allows easy use is called:**
A) Clean (B) Simple (C)Complex (D) Well-structured

0. **In 2NF, which form of dependency is removed: (5 Times)**
A) Functional (B) Partial (C) Associative (D) Transitive

1. **A functional dependency between tow or more non-key attributes is called?**
A) Partial functional dependency (B) Partial non-key dependency
C) Transitive dependency (D)None

2. **A constraint between two attributes is called:**
A) functional relation (B) attribute dependency
C) functional dependency (D) relation constraint

3. **In 3 NF (Third Normal Form), a non-key attribute must not depend on a: (5 Times)**
A) Non-key attributes (B) key attributes
C) Composite key (D) Sort key

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13
B	B	D	C	D	A	A	B	D	B	C	C	A

SHORT QUESTIONS OF CHAPTER-4 ACCORDING TO ALP SMART SYLLABUS 2020-21

. **Define Determinant.**

ns: A determinant is an attribute whose value enables us to obtain the values of other related attributes. It appears on the left side of a functional dependency. Thus, in A→ B, the determinant is A.

. **What are database anomalies? Only list their names. (4 Times)**

ns: Database anomalies are the errors/mistakes that occur due to duplication of data in the relations. These anomalies affect the process of inserting, deleting and modifying data in the relations. Important data may be lost if a relation with database anomalies is updated. Following are the types of anomalies.
i. Insertion anomaly ii. Deletion anomaly iii. Modification anomaly

. **Define 3rd Normal form. OR When is a relation in 3NF? (4 Times)**

ns: A relation is said to be in 3rd normal form if it is in 2Nf and no transitive dependency exists. The transitive dependency is an important factor in normalization. A relation will not said to be in 3NF if the value of non-key attribute can be obtained by knowing the value of another non-key attribute.

. **What do you mean by entity integrity?**

ns: It is constraint on a primary key value. It is stated that any attribute of primary key cannot contains null value. If primary key contains null value then it is not possible to uniquely define the tuple or record assures that it should be easy to identify each entity in database.

. **Define entity integrity? (2 times)**

ns. The entity integrity is a constraint on primary key value. It states that any attribute of a primary key cannot contain null value. Entity integrity ensures that it should be easy to identify a record in relationship.

. **How referential integrity can be achieved? (2 Times)**

ns. It is constraint on a foreign key value. It states that if a foreign key exists in a relation then foreign key value must match the primary key value in parent relation.
It is achieved by connecting two relations by specifying relationships between them. When two relations are connected, one relation is called parent while other relation is called dependent relation.

7. How second normal form is achieved? OR When a relation in second Norm form? (2 Times)

Ans. It is achieved when:

i) The primary key contains only one attribute.

ii) Relation should be in first normal form.

iii) Every non-key attribute is functionally dependent on the full set of prima key attributes.

8. Define partial dependency?

Ans. A type of dependency in which one or more non-key attributes are functiona dependant on a part of primary key is called partial dependency.

9. Define transitive dependency? (2 Times)

Ans. It is a type of a functional dependency between two or more non-key attributes. exist if non-key attribute depends on other non-key attribute.

10. Write two types of anomalies?

Ans. i) **Insertion anomaly**

Suppose a new course "Programming" is to be inserted in the relation. Th new course title can not be inserted without inserting Emp_ID as primary k consists of Emp_ID and course title.

ii) **Deletion anomaly**

suppose the record of Emp_ID 140 is to be deleted. The data of MS-Exc will also be deleted along with that employee.

11. Define repeating group?

Ans. The term "repeating group" has also come to be used informally and imprecise by database designers to mean a repeating set of columns, meaning a collection colours containing similar kinds of values in a table. This is different to its origin meaning in relation to 1NF.

12. Define mutual exclusiveness of data?

Ans. The data that does not have overlapping information is known as mutual exclusive data. It creates problem in cases where values are "Yes/No".

13. What is a functional dependency? (2 Times)

Ans. It is a relationship between two attributes. It states that if the value of one attribut is known, it is possible to obtain the value of another attribute e.g Roll No. Marks.

14. Differentiate between full functional dependency and transitive dependency.

Ans.

Functional dependency	Transitive dependency
It is the relationship between two attributes. It states that if the value of one attribute is known, it is possible to obtain the value of another attribute.	Transitive dependency is a type functional dependency in which a no key attribute depends on any othe non-key attribute.

15. Differentiate between cardinality and modality?

Ans:

Cardinality	Modality
The maximum number of instances of one entity associated with each instance of the related entity is known as cardinality.	The minimum number of instances one entity associated with eac instance of the related entity is know as modality.

16. How is database integrity maintained?

Ans: Database integrity is maintained with the help of integrity constraints. The constraints are the rules that are designed to keep data consistent and correct. They act like a check on the incoming data. DBMS provides several mechanisms to enforce integrity of the data.

17. What is the purpose of logical database design?

Ans: The logical or conceptual model describes the data stored in the database. It contains the definition of the data to be stored in database. It also contains the rules and information about the structure and type of data. It is the complete description of data stored in database.

OBJECTIVES (MCQ'S) OF CHAPTER-5
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. **Which of the following is not a database object?** **(3 Times)**
(A) table (B) query (C) form (D) MS. Word
2. **____________ is used to retrieve data from one or more tables:**
(A) macro (B) table (C) query (D) form
3. **A database consists of various components called** **(3 Times)**
(A) Tools (B) Properties (C) Entities (D) Objects
4. **Which of the following object of database is used to retrieve data from database:**
(A) Queries (B) form (C) Reports (D) Tables
5. **The output of the query is in the form of a:**
(A) Table (B) Form (C) Report (D) Query
6. **Which object is used to retrieve data from database and present in formatted way?**
(A) Report (B) Form (C) Table (D) Query
7. **Microsoft Access saves the database with the extension:** **(3 Times)**
(A) .mdb (B) .msdb (C) .madb (D) None
8. **A report is complete set of ....field:**
(A) Distinct (B) Related (C) Designed (D) All
9. **In MS Access table contains:**
(A) Records but no fields (B) Fields but no records
(C) Both records and fields (D) None of these
10. **Which option in MS Access is used to create a new database from scratch?**
(A) Access template (B) Blank Database (C) Existing Database (D) New Folder
11. **What is the default field size of a Text data-type in MS-Access.** **(5 times)**
(a) 2 (b) 5 (c) 20 (d) 50
12. **Which shortcut key is used to open an existing database in MS. Access.** **(5 times)**
(a) CTRL+N (b) CTRL + S (c) CTRL + O (d) CTRL + Z
13. **The smallest meaningful unit of data in a database is called:** **(5 times)**
(a) Bye (b) Bit (c) Character (d) Field
14. **Which data type is the default data type in MS-Access:**
(a) Text (b) memo (c) Number (d) information
15. **Which wildcard replaces one character only.**
(a) * (b) ? (c) : (d) !
16. **The extension of image file is:**
(a) .exl (b) .doc (c) .bmp (d) .ppt
17. **The example of popular DMBS is:**
(a) MS-Word (b) MS-Access (c) MS-Excel (d) MS-Power Point
18. **Which of the following is correct association?**
(a) file=column (b) record=row (c) field=row (d) record=table
19. **The maximum number of tables in a database are:**
(a) 01 (b) 02 (c) 03 (d) Many
20. **It is simple to create database using.**
(a) query (b) common standards (c) easier programming (d) wizard
21. **The output of a database application is:**
(a) Form (b) Query (c) Report (d) Macros

ANSWERS

1	2	3	4	5	6	7	8	9	10	11
D	C	D	A	A	A	A	B	C	B	D
12	13	14	15	16	17	18	19	20	21	
C	D	A	B	C	B	B	D	D	C	

SHORT QUESTIONS OF CHAPTER-5
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. List different buttons available on Access database window. **(2 Times)**

Ans: Different buttons in the database window are as follows:

Tables
Queries
Forms
Reports
Pages
Macros
modules

2. Define IDE. OR What do you mean by IDE? **(3 Times)**

Ans: IDE stands for integrated development environment. It is a collection of facilities provided to the users. It is used to create database and database applications. An IDE simplifies the tasks of creating and using database.

3. What is extension of Database file in MS Access?

Ans: The extension of database file in MS access is .mdb.

4. Write down two database objects in MS. Access. **(2 Times)**

Ans: Following are the database objects in MS. Access:

1. Tables 2. Query 3. Forms 4. Reports

5. What is Microsoft Access?

Ans: MS access is one of the most popular and powerful relational database management systems. It provides various built in features to the users. These features help the user to create database and view information. It can store large amount of data and also process it.

6. What is Data Base Wizard? **(4 Times)**

Ans: Database wizard is a set of steps that guides the users to create a database easily. It includes choosing a template, selecting fields, making customizations, adding pictures and databases.

7. What is meant by sample databases?

Ans. These applications help the user to learn about tables, forms, queries and reports. User also understand the interconnection of these objects to form a database system.

8. List out any two advantages of MS-access?

Ans. **i)** MS Access provides the facility of sample databases.

ii) MS Access provides the facility of ample Wizards.

9. Define term RDBMS? OR What do you mean by RDBMS? **(3 Times)**

Ans. RDBMS stands for relational database management system. It is a collection of programs which are used to create and maintain relational databases.

A database in which data is stored in relation is called relational database. Relation is another term used for table. A table in database has a unique name and identifies its contents.

10. Write the use of data window is MS Access.

Ans. It is used to organize all objects in the database. It is divide into two parts. The left side contains seven buttons used to develop database application. The right side displays the lists of different objects.

11. Define form?

Ans: A graphical interface used to interact with the database is called form. It is used to enter, retrieve, change, delete or update data in the database.

OBJECTIVES (MCQ'S) OF CHAPTER-6
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. To find a name that starts with S, the criteria is written as:
(A) S#? (B) S# (C) ?S (D) S*

2. The graphical query tool is known as: (4 Times)
(A) query tool (B) design grid (C) query form (D)design form

3. The output of a query is in the form of a: (2 Times)
(A) table (B) form (C) report (D)query

4. Find and replace command is found in: (4 Times)
(A) edit menu (B) file menu (C) Tool (D) view menu

5. A logical grouping of character is a :
(A) file (B) record (C) field (D) all of these

6. __________ table views are available in MS-Access: (2 Times)
(A) 4 (B) 3 (C) 2 (D)1

7. The data in table is entered in: (4 Times)
(A) design view (B) normal view (C) data sheet view (D)layout view

8. Insert command is used to insert:
(A) a new table (B) a new record (C) a view (D)dependencies

9. What symbol indicates that you are editing a record? (2 Times)
(A) Pencil (B)Black arrow (C) key (D) asterisk

10. In relational database, a single piece of information is called (2 Times)
(A) field (B) record (C) entity (D) attribute

11. Which data type is default type in Access?
(A) Memo (B) number (C) text (D) Auto number

12. A collection of related fields is: (2 Times)
(A) file (B) database (C) table (D) record

13. Which key is used to move from field to field in table window in datasheet view.
(A) Tab (B) Esc (C) Enter (D) Spacebar

14. Which of the following is used to retrieve data from database and represent it to the user in a formatted way
(A) form (B) query (C) table (D) report

15. A request for information from a database in database terminology is called:
(A) Report (B) Letter (C)Table (D) Query

16. A row of relation is called:
(A) Attribute (B) Entity (C)Tuple (D) Relation

17. It makes very simple to create a database: (6 times)
(a) sample database (b) wizard (c) common standards (d)easier programming

18. Which object is the output of a database application? (6 times)
(a) Form (b) Query (c) Table (d) Report

19. Which view is used to add, edit or delete record from table? (6 times)
(a) Record view (b) Datasheet view (c) Design view (d) Edit view

20. Storage and retrieval of data is related to: (6 times)
(a) data capturing (b) data manipulation (c) managing output result (d) analysis

21. How find four character name that starts with H, the criteria is specified as: (7 times)
(a) H*a (b) H?4 (c) H??? (d) H ##

22. In relational database, a table is also called:
(a) tuple (b) file (c) schema (d) relation

23. A Virtual Table that is constructed from other tables is called:
(a) tuple (b) table (c) view (d) report

24. To find all names start with M from student table, the criteria is:
(a) Like "M?" (b) Like "M-" (c) Like "M#" (d) Like "M*"

25. Which data type can be used to define a field that consists of only numbers to be used in calculations?
(a) Data/ Time (b) Memo (c) Number (d) Text

26. The maximum length of text type field in MS-Access is:
(a) 50 characters (b) 250 characters (c) 155 characters (d) 255 characters

27. Which of the following Menues is used to switch between table?
(a) Edit (b) File (c) Tools (d) View

28. Which data type is the default type?
(a) memo (b) number (c) text (d) auto number

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
D	C	A	A	C	C	C	B	B	A	C	D	A	B
15	16	17	18	19	20	21	22	23	24	25	26	27	28
D	C	B	D	D	B	C	D	C	D	C	D	D	C

SHORT QUESTIONS OF CHAPTER-6
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Define Text Data Type in MS-Access.

Ans: Text data type is used to store alphabetic, numbers and special characters. It can store up to 255 characters. The default length of Text data is 50 characters.

2. Differentiate between Field and Record.

Ans: **Field:** A field is a combination of one or more related characters. It represents one unit of data. Field is the smallest unit of data that can be accessed by the user. It is also known as column.

Ali
Imran
Kamran
Faisal

Record: Collection of related fields represented as a single unit is called record. It is also known as tuple or row. i.e.

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3. Name two table views available in MS-ACCESS. (3 Times)

Ans: Table view is a way of looking at the table. MS Access provides two table views that are:
i. design view
ii. datasheet view.

4. Define the term cardinality of relation. (3 Times)

Ans: Total number of rows or record in a relation/table is called cardinality of a relation. The cardinality of a table changes as new records are added or existing records are deleted. A table with sixty records has a cardinality of 60.

5. Define the term table in database. (2 Times)

Ans: Table is the most important object of a database. It is the combination of rows and columns. It is the central concept in relational database. All data in a relational database is stored in tables. Table is known as relation.

6. What is field? (3 Times)

Ans: A field is a combination of one or more related characters. It represents one unit of data. Field is the smallest unit of data that can be accessed by the user, It is also known as attribute i.e.

Name
Imran
Kamran
Ali

7. **What are Reports?**

Ans: Reports are the output of a database application. Report is an important object of database management system. The report can be displayed on the screen, on the printer or on the disk. The reports may contain graphs and charts.

8. **Write two characteristics of tables.**

Ans: i. Each cell of the table contains only one value.
ii. Each column has a distinct name, which is the name of the attribute (field) it represents.

9. **How does a database differ from a table?** **(3 Times)**

Ans:

Database	Table
The Database is the main structure that holds one or more tables.	A table is an object in the database that is used to store data about a particular entity.

10. **What is Attribute? Give an example.**

Ans: The characteristics of entity are known as attribute. It is the name of the field in a relation. An entity may have many attributes

Example:

Attributes of teacher are name, gender, telephone etc.

11. **What is the use of Input Mask?**

Ans: An input mask controls the value of record and sets it in specific format. It is similar to the FORMAT property but it displays the format on datasheet before the data is entered.

Example:

Phone number filed can be formatted with input mask to accept 10 digits as "(555) 123 456."

12. **What is the use of field size property?**

Ans: Field size is used to set the number of characters required in text and number field. The default field size for the text type is 50 characters. The field size can be limited to certain number of characters if value in field is small.

13. **Define the term sorting.**

Ans: The process of arranging data or records in sequence is known as sorting. The data can be stored in two ways i.e.
1. Ascending sort 2. Descending sort

14. **What is filter? Explain its two types available in MS-Access.**

Ans: Filters are used to extract records that match a set of criteria. Filters are used with opened tables. Different types of filter are:

Filter by form

It is useful if the table is large and it is difficult for the user to find the record that contains the value according to which the filter is to be applied.

Filter by selection.

Its feature is used to filter records that contains identical data values in a given field.

15. **Write a query to display all record from employee table?**

Ans. Select * from emp;

16. **List any field properties?**

Ans. i) Field size ii) Format iii) Indexes iv) Default value.

17. **What is datasheet view in Ms-access?**

Ans. The table view that is used to enter, delete or modify data in a table is called data sheet view. The table in this view is displayed in rows and columns.

18. **How datasheet view is different from table design view?**

Ans.

Datasheet view	Design view
In datasheet view we enter, delete or modify data. It shows tables in the form of rows and columns.	Design view is used to design the structure of a table. It is used to specify name, data type, and description of fields.

19. What is the use of SELECT query?

Ans. A SELECT query is used to extract data from table based on specified criteria may retrieve data from one or more tables. It displays result in datasheet wh the records can be updated. It can be used to group records and calculate su counts, averages and other types of totals.

20. List three methods to create table in MS Access.

Ans. i. Create table in design view.
ii. Create table by using wizard.
iii. Create table by entering data.

21. Discuss the use of design view in MS Access.

Ans. It is used to specify name, data types and description of fields. Primary key is a specified in this view. The structure of an existing table can also be changed design view.

22. Why is it important to specify the data type and size of the field?

Ans. Each field must be assigned a particular data. The data type specifies the type data that can be stored in the field. Field size is used to set the number characters required in text or number field. It saves disk space and prevent en errors.

23. What is the use of wild cards? **(2 Times)**

Ans. Wild cards are special symbols that are used in queries to search data. So important wild cards are:

i. ?: It takes the place of a single letter.
ii. *: It represents the number of characters.
iii. "a*": All words beginning with a.

24. How is criteria specified in a query?

Ans: Criteria are specified with the help of wild cards. Wild cards are special symbo that are used to extract particular records form the database.

25. Define the term degree of relation?

Ans: The number of fields in a relation is called degree of relation. The degree of a tab is usually not changing once the table has been created. A table with the five fiel has a degree of 5.

LONG QUESTIONS OF CHAPTER-6
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Explain 8 different data types available in MS. Access. (3 Times)
2. What is filter? Explain its two types available in MS. Access. (4 Times)
3. What is table? Write down six characteristics of table.
4. How new database is created? Explain the procedure of creating table using wizard.

OBJECTIVES (MCQ'S) OF CHAPTER-7
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. A sub form can be created by using:
(A) drag and drop method (B) the form wizard
(C) sub form wizard (D) all of these

2. How many are the layout of report?
(A) 2 (B) 3 (C) 4 (D) 5

3. A form within another form is called: **(2 Times)**
(A) sub-form (B) main form (C) justified (D) normal

4. Forms are designed for: (2 Times)
(A) input data (B) manipulate data (C) accepting change (D) all of these

5. **How many form layouts are provided by MS-Access?** **(2 Times)**
(A) 2 (B) 4 (C) 6 (D) 8

6. **Which of the following is used to display yes/no values?**
(A) Checkbox (B) Option button (C) Both a and b (D) None

7. **Which Auto form displays one record at a time?**
(A) Tabular (B) columnar (C) Datasheet (D) Justified

8. **Which view can be used to enter or modify data in the underlying table:**
(A) Form view (B) Table Design view
(C) Form Design view (D)New form view

9. **All of the following are form layouts EXCEPT:**
(A) Tabular (B) Columnar (C) Justified (D) Relationship

10. **A report may be base on:**
(A) A table but not a query (B) A query but not a table
(C) Both a table and query (D) None of these

11. **Which of the following is NOT a function of report?**
(A) Display data (B) Edit data
(C) Output of database application (D) Print data

12. **Which of the following options is used for editing forms in MS Access?**
(A) Grid lines (B) Snap to Grid (C) Resizing objects (D) All

13. **Which of the following is used to display a list of items in forms:**
(A) List box (B) Combo box (C) Both a and b (D) Neither a nor b

14. **Which from layout one record at a time?** **(2 times)**
(a) tabular (b) columnar (c) datasheet **(d)** justified

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
D	B	A	D	B	C	B	A	D	C	B	D	C	D

SHORT QUESTIONS OF CHAPTER-7
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. **Write the uses of Reports.** **(4 Times)**

Ans: i, Reports present the required information in formatted style.
ii. Reports provide flexibility to present the same data in different ways.
iii. Reports can display information with graphics and charts etc.

2. **Name two layouts of forms in MS Access.**

Ans: i. Columnar form ii. Justified form

3. **What do you know about columnar form?**

Ans. Columnar form is used to display one record at a time. It displays text boxes and tables. The text boxes represent the fields of table or query. The label represents the names of field.

4. **Why is report generator used to database systems?**

Ans. Report generator is used to generate a report. Reports are the output of database application. The user can generate different types of reports by manipulating the database.

5. **List two advantages of report.**

Ans. i. Reports present the required information in formatted style.
ii. Reports can display information with graphics and charts.

6. **Write any two uses of Forms.**

Ans. i. Form is used to manipulate database easily.
ii. It can be used to add data in the database, retrieve, view and search data from the database.

7. Write the use of datasheet form.

Ans. It is used to display many records at one time. It displays records in datasheet view of Access. Each row in this form displays one record of the table.

8. Why is a list box used in Forms?

Ans. List box is used to display a list of items in forms. The user can select the desired item from the available items. The user can select one or multiple items.

10. Which control is used to execute commands in MS-Access forms?

Ans: A command button is used to execute different commands by clicking on it. The caption of the command button indicates the type of command executed by the button.

OBJECTIVES (MCQ'S) OF CHAPTER-8
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. An IDE consists of:
(A) text editor (B) compiler (C) debugger (D) all of these

2. The extension of C source program is: **(3 Times)**
(A) .b (B) .c (C) .obj (D).exe

3. Which of the following represents the preprocessor directive?
(A) void main (void) (B) {} (C) # include <stdio.h> (D)include<std.h>

4. C statements end with:
(A) period (B) comma (C) semi-colon (D)question mark

5. .exe file is produced by the **(5 Times)**
(A) linker (B)loader (C) compiler (D) interpreter

6. Void occupy how many bytes in memory
(A) zero (B) one (C) two (D) four

7. A programs' syntax error is detected by
(A) Linker (B)compiler (C) loader (D) debugger

8. The lowest level of programming language is:
(A) Assembly language (B) Java (C)Pascal (D) C++

9. ________ key is used to save a file in Turbo C++.
(A) D1 (B) F2 (C) F5 (D) F7

10. Who developed C:
(A) Von-Neumann (B) Al-Khuwarizmi (C) Charles Babbage (D)Dennis Ritchie

11. Turbo C++ can compile:
(A) C programs only (B) C and C++ programs
(C) Turbo C programs only (D)Turbo C++ programs

12. Processor directives are command for:
(A) Microprocessor (B) Language Processor (C) C preprocessor (D)Loader

13. Header files in C contain:
(A) Compiler commands (B)Library functions
(C) Header information of C programs (D) Operators for files

14. Which of the following syntax is used to include header file?
(A) #include<name of header file> (B) # include name of he header file
(C) Both a or b (D) None of these

15. Stdio.h is part of:
(A) comment section (B)C standard library (C) Compiler (D) main function

16. The name of header file is written between:
(A) [ ] (B) ( ) (C)<> (D) <<>>

17. **Debug is the process of**
(A) Creating bugs in program (B) Identifying and removing error
(C) Identifying Errors (D) Removing Errors

18. **Division by zero is an example of:** **(2 Times)**
(A) compile error (B) Run-time error (C) Logic error (D) None

19. **Which of the following errors are NOT detected by compiler?**
(A) Syntax error (B)Logical error (C) both a and b (D) None

C-LANGUAGE

20. **C-Language was developed in:** **(8 times)**
(a) 1962 (b) 1969 (c) 1970 (d) 1972

C-LANGUAGE

21. **The statement written by programmer is called:** **(8 times)**
(a) Source code (b) exe code (c) Syntax (d) Object code

22. **Graphical representation of a program is called:**
(a) flow chart (b) algorithm (c) Identifier (d) relationship

23. **The process of converting source code into object code is known as:**
(a) Compiling (b) Executing (c) Linking (d) Saving

24. **A set of rules that must be followed by programmer to develop program is called:-**
(a) Syntax (b) Preprocessor (c) Bug (d) Debug

25. **The output of the compiler is:** **(2 Times)**
(a) library code (b) linked code (c) object code (d) source code

26. **The Data type in C that can handle Fractional values is called:**
(a) long (b) char (c) float (d) int

27. **stdio stands for**
(a) standard input output (b) simple input output
(c) string input output (d) start input output

28. **The target code produced by the compiler is:**
(a) object code (b) source code (c) library code (d) linked code

29. **The output of the compiler is called:**
(a) Library code (b) Source code (c) Linked code (d) Object code

30. **The extension of header file is:**
(a) .c (b) .txt (c) .hf (d) .h

31. **C is a:**
(a) High Level language (b) Low level language
(c) Assembly language (d) Machine Language

32. **Which of the following language provided the basis for the development of C?**
(a) B (b) c++ (c) Pascal (d) Cobol

33. **The programmer usually enters source code into a computer using:**
(a) Compiler (b) Text editor (c) Debugger (d) (Linker

ANSWERS

1	2	3	4	5	6	7	8	9	10
D	B	C	C	A	A	B	A	B	D
11	12	13	14	15	16	17	18	19	20
B	C	B	A	B	C	B	B	B	D
21	22	23	24	25	26	27	28	29	30
A	A	A	A	C	C	A	A	D	D
31	32	33							
A	A	B							

SHORT QUESTIONS OF CHAPTER-8
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Who is Programmer? **(3 Times)**

Ans: A person who develops a computer program is called programmer. programmer develops programs to instruct the computer how to process and convert it into information. Programmer uses programming language or to to write programs.

2. Differentiate between Syntax Error and Logical Error.

Ans:

Syntax Error	Logical Error
Syntax error is a type of error that occurs when an invalid statement is written in program. Syntax errors are detected by compiler. A program containing syntax errors cannot be compiled successfully. Typing 'forr instead of 'for' is an example of syntax error.	A type of error that occurs due to po logic of the programmer is known logical error. A statement with logic error is executed and may produc unexpected and wrong results in th program. Typing, a wrong formula t calculate the results is an example c logic error.

3. What do you mean by case sensitive in C-language?

Ans: Case sensitivity means upper case and lower case alphabets/letter can be used f different propose. C is a case sensitive language it can differentiate uppercase ar lowercase words. All keywords are written in lowercase.

4. State the purpose of defining preprocessor directive. **(5 Times)**

Ans: Preprocessor directives are the first line of the C program. Define directives is used to declare constant that remains same during execution of the program.

5. What is an assembler?

Ans: An assembler is translating program that translates the instruction of an assembl language into machine language.

6. Define object code. **(7 Times)**

Ans: The computer program in machine like language or in a low-level language i called object program or object code. An object program can be easil understandable by the computer. It runs more efficiently on the compute system.

7. What is syntax error? Give an example.

Ans: Syntax error is a type of error that occurs when an invalid statement is writter in program. Syntax errors are detected by compiler. A program containing syntax errors cannot be compiled successfully. Typing 'forr' instead of 'for' is an example of syntax error.

8. Define linking. **(5 Times)**

Ans: Linking is the process in which the object file produced by the compiler is linked to many other library files. The library files must be linked with the object file before execution of the program.

9. What is header file? **(5 Times)**

Ans: The header files contain the declarations or information of standard library functions. These functions are called in the main body of the program to perform different tasks. The extension of a header file is ".h".

10. Define the terms Bug and Debug.

Ans: An error in a computer program is known as bug. The programmer can make different errors while writing programs. The errors must be removed from the program before it can be compiled and executed. The process of finding and removing bugs from a program is called debugging.

1. What do you mean by Delimiters? (5 Times)

ns: The statements of the program are written in curly braces. The curly brace { is called opening brace and } is called closing brace. The braces are also known as delimiters. These statements inside these braces are collectively known as the body of a program.

2. Give an example of Preprocessor Directive.

ns: The preprocessor directives are commands that give instructions to C preprocessor. Preprocessor directives start with hash # and the keyword include or define. These directives are written at the start of program.

3. Why is C known as strongly typed language?

ns: C is strongly typed language. It means that a variable must always be declared before it can be used in a program. The compiler gives an error if an undeclared variable is used in a program.

4. Define source code.

ns: A program written in a high level language is called source code. It is also called source program. It cannot be executed by the computer directly. Language processor is required to convert it into object code.

5 Define program. (2 Times)

ns: A well-defined set of instruction given to computer is called computer program. It is written in a programming language. Computer always follows the instructions written in the program. A person who develops the program is known as programmer.

6. Define High Level Language. (3 Times)

ns: A type of language that is close to human language and far away from computer is called high level language. The instructions in these languages are similar to English language such as input and print etc. Computer cannot execute high level language directly. Language processor is required to convert them to object code.

7. How a source code is different than an object code? (3 Times)

ns :

Object code	Source code
The computer program in machine like language or in a low-level language is called object program or object code. An object program can be easily understandable by the computer. It runs more efficiently on the computer system.	A program written in a high level language is called source code. It is also called source program. It cannot be executed by the computer directly. Language processor is required to convert it into object code.

8. List four advantages of C-Language.

ns:
1. Convenient language
2. Well-structured language
3. Machine independence
4. Small language

9. What do you mean by bug?

ns: An error In a computer program or software is known as a bug. A programmer can make different errors while typing or writing a program. A program cannot compile if it contains any bug.

10. List any four commonly used High Level Languages. (2 Times)

ns: C++, Java, Pascal, Basic , Cobol.

11. Why the Source Code cannot be executed directly?

ns: Computer can only understand binary or machine language. But high level language cannot understand by the computer. So to run a source code on computer we need a language processor to convert it into machine language. Then it becomes understandable by computer.

12. Differentiate between Preprocessor directives and header file.

ns:

Preprocessor directives	Header file
Preprocessor directives are the instructions given to the compiler before execution of actual program. It is also known as compiler directive. It is proposed by a program called preprocessor.	Header files are the collection of standard library functions to perform different tasks. Each header file has specific purpose. Many header files can be conclude in a single program.

23. Name two main categories of programming languages.

Ans: 1. High level language 2. low level language

24. Define Runtime Error.

Ans: Runtime errors occur during the time of the execution of the program. It occu when a statement directs the computer to execute an illegal operation such as number dividing by zero.

25. How program logic implemented?

Ans. In unstructured programming language, the entire logic of the program implemented in a single module or function. The program written in this langua is error prone, difficult to understand, modify and debug.

26. Define assembly language?

Ans. It is a low level language. It is one step higher than machine language. In assemb language instructions are replaced with English like words know as mnemonics.

27. Write down preprocess or Math.h

Ans. # include <math.h>

28. Differentiate between machine and assembly language?

Ans.

Machine Language	Assembly Language
i) The type of language in which instructions are written in binary form is called machine language.	**i)** It is one step higher than machine language.
ii) It is directly understood by computer.	**ii)** Translator is required for this language
iii) It is very fast.	**iii)** It is slower than machine.
iv) It is machine dependent.	**iv)** It is not machine dependent.

29. What is meant by comments? Also give an example?

Ans. Comments are the statements that are not executed by compiler. They are of two types

i) Multi line comments
...................../

ii) Single line.
\\....................

i-e \\ I love C++.

30. Why does machine language programs execute faster?

Ans: A program written in machine language can be executed very fast by comput because computer understands it directly and it does not need any translator understand this language.

31. What is the use of main ( ) function in C. **(2 Times)**

Ans: The main ( ) function is the place where execution of a C program starts. When t program is executed, the control enters main ( ) function and starts executing statements.

32. Differentiate between source code and object code.

Ans:

Source code	Object code
A program written is a high level language is called source code. Computer can not understand this code directly.	A program in machine language is call object code. Computer understand this code directl

33. What is meant by language processor?

Ans : A language processor or translator is a type of system software that converts programs written in high level language into machine language. Every computer language has its own translator.

34. Why the logical error is the most difficult error to find?

Ans: The logical error is the most difficult error because it cannot be detected by the compiler. It does not crash the programs. The user needs to review the whole program to find logical error.

35. Briefly explain normalization.

Ans: The process of producing a simpler and more reliable database structure is called normalization. It is used to create a suitable set of relations for storing data.

36. Enlist logical operators.

Ans:
i. AND operator (& &)
ii. OR operator (I I)
iv. NOT operator (I)

37. Differentiate between compiler and interpreter. OR What is compiler? (2 times)

Ans:

Compiler	Interpreter
A compiler is a program that converts the instructions of a high level language into machine language as a whole. The compiler checks whole programme and generate machine instructions.	An interpreter is a program that converts one statement of a program into machine language at one time. It executes a statement before translating the next statement of the source program.

38. Describe the concept of linker.

Ans: A program that combines the object program with additional library files is known as linker. It is a part of c++ compiler. The linker generates error message if the library file does not exist. A new file is created with .exe extension if the process of linking is successful.

39. What are logical errors?

Ans: A type of error that occurs due to poor logic of the programmer is known as logical error. A statement with logical errors may produce wrong results. For example typing a wrong formula.

40. Differentiate between linker and loader?

Ans:

Linker	Loader
A program that combines the object program with additional library files is known as linker. It is used to perform the process of linking. In this process, the library files are linked with object program. These files are used to accomplish different tasks such as input/output etc.	A program that places an executable file in the memory is known as loader. A program must be loaded in the memory in order to execute it.

41. Why do you include "stdio.h" header files in C-program?

Ans: This header file includes in C-program because this header file contains the definitions of built-in input and output functions such as printf () and scanf () etc.

42. What is the purpose include directive?

Ans: The "include" preprocessor directives enable a program to access a library. Each library contains different header files. The include preprocessor directive is used to include header files in the program.

43. How is header file included in C-program?

Ans: The preprocessor directive include is used to add a header file in the program. The name of the file is written in angle brackets <> after # include directive.

LONG QUESTIONS OF CHAPTER-8
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Briefly describe the basic structure of C program with example.
2. How would you create, edit, compite and execute a C program? Discuss briefly.
3. What is an Error? Explain different types of Errors in C-Language. (2 Times)
4. What necessary steps are taken to prepare a C program for execution? Explain in detail. (2 Times)
5. What is language processor? Describe different types of language processor.

OBJECTIVES (MCQ'S) OF CHAPTER-9
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Which is a numeric data types?
(A) floating point (B) integer (C)both a and b (D)none of these

2. Variable name cannot begin with a(n):
(A) number (B) underscore (C)upper-case letter (D)lower-case letter

3. What will be the output of the following print f(".2f,5.5555);?
(A) 5.555 (B) 5.55 (C) 5.56 (D)5.00

4. Which of the following is not a valid variable name?
(A) a 12.3 (B) my name (C)int (D)both b and c

5. A relational expression is false, it has the value ________:
(A) zero (B) one (C) less than zero (D) none of these

6. Which of the following is a valid character constant?
(A) "a" (B) "b" (C) "6" (D) '4'

7. Which of the following is not character constant?
(A) 4 (B)'a' (C) '1' (D)'5'

8. Variables are created in:
(A) ROM (B) cache (C) RAM (D)Hard disk

9. Relational operators are used to
(A) establish a relationship among variables (B) perform arithmetic operations
(C) compare two values (D) create relationship

10. The symbol " = " represents. (2 Times)
(A) comparison operator (B) assignment operator
(C) equal to operator (D) logical operator

11. Which of the following data type offers the highest precision? (2 Times)
(A) long double (B) unsigned long int (C) float (D) long int

12. All of the following are logical operators except:
(A) NOT (B) AND (C) OR (D) =

13. Which term describes the kind of values that a variable can store
(A) data type (B) variable name (C) variable type (D) variable size

14. Variable and constant name cannot have a : (4 Times)
(A) Number (B) Underscore (C) Period (D) Letter

15. Total number of key words in C is:
(A) 30 (B) 32 (C) 34 (D) 36

16. Void occupy how many bytes in memory: (2 Times)
(A) zero (B) one (C) two (D) four

17. The expression p-=q is equivalent to:
(A) p=q-p (B) p=q-1 (C) p=p-q (D) q=p-q

18. The number of bytes used by long double data type is:
(A) 4 (B) 8 (C) 10 (D) 12

C-language

19. How many bytes the float data types take in memory **(3 times)**
(a) 2 (b) 3 (c) 4 (d) 8

20. A type of operator that works with one operand is called: **(9 times)**
(a) Binary operator (b) Unary operator (c) Ternary operator (d) Relational operator

21. ++ This means to increase a value by one: **(9 times)**
(a) Modulus (b) Decrement (c) Inc (d) Increment

C-LANGUAGE

22. A+=B is equivalent to: **(3 times)**
(a) b+=a (b) a=+b (c) A=A+B (d) b=b+a

23. Which is a valid character constant? **(9 times)**
(a) A (b) "Hello" (c) '6' (d) =

24. C statement ends with: **(9 times)**
(a) Period (b) Comma (c) Colon (d) Semi colon;

25. An array subscript should be: **(9 times)**
(a) Float (b) Double (c) int (d) Real

26. Which is a numeric data type: **(9 times)**
(a) Floating point (b) integer (c) double (d) long double

27. The number of bytes used by int data type in C is:
(a) 2 (b) 4 (c) 6 (d) 8

28. Functions used for I/O are stored in:
(a) stdio.h (b) conio.h (c) Math.h (d) inut.h

29. Which Operation is performed by Relational Operators:
(a) comparison (b) addition (c) subtraction (d) division

30. Which is numeric data type with decimal point:
(a) float (b) int (c) char (d) long

31. Which of the following is a valid character constant:
(a) a (b) '@' (c) "c" (d) =

32. In C variable cannot contain:
(a) number (b) underscore (c) letter (d) period

33. A memory location with some data that can be changed is called:
(a) Constant (b) Variable (c) Named constant (d) Address

34. Int is a ____________ in C?
(a) Special word (b) Keyword (c) Cut word (d) First word

35. In C, the maximum length of variable name is:
(a) 25 characters (b) 255 characters (c) 31 characters (d) 55 characters

36. Which of the following is not logical operator:
(a) && (b) || (c) | (d) <=

37. The left side of an assignment statement holds:
(a) Variable (b) Constant (c) Expression (d) Digit

38. Which data type is the most appropriate for storing a name?
(a) Float (b) Int (c) Char (d) Long

39. Which of the following operators has lowest precedence?
(a) = (b) + (c) * (d)!

40. Which of the following operator has the lowest precedence?
(a) ! (b) + (c) = (d) = =

41. The number of digits after a decimal point is called:
(a) Significance (b) Range (c) Precision (d) Scope

42. In C-language, variable name (s) cannot begin with a (an).
(a) Number (b) Lower-case letter (c) Upper-case letter (d) Underscore

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13
C	A	B	D	A	D	A	C	C	B	A	D	A
14	15	16	17	18	19	20	21	22	23	24	25	26
C	B	D	C	C	C	B	D	C	C	D	C	B
27	28	29	30	31	32	33	34	35	36	37	38	39
A	A	A	A	B	D	B	B	C	D	A	C	A
40	41	42										
C	C	A										

SHORT QUESTIONS OF CHAPTER-9
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. **Write any two rules for Naming variable** **(2 Times)**

Ans: I. Variable may include letters, numbers and underscore (_).

ii. The firs character of variable must be a letter or underscore_. The use of underscore is not recommended. The variables 9 minute. #home and 2 kg are invalid.

2. **Differentiate between = 'a' and =a.**

Ans: In ='a' statement character a is assigned to a variable.

An in =a ASCII value will be assigned to a variable or a variable value can also be assigned to other variable. i.e.

```
Int a=5;
Int b;
b=a;
```

This will assign the value of a to b which is 5.

3. **What is meant by Associativity of Operators?**

Ans: The order in which operators of same precedence are evaluated is known as operator associativity. If an expression contains some operators that have same precedence level, the expression is evaluated either from left-to-right or right –to –left.

4. **Differentiate between declaring and defining a variable.**

Ans:

Declaring	Variable
Variable declaration tells the compiler the name of the variable to be used in the program and the type of information stored in it. It does not reserve memory space for variable in the memory.	On the other hand, when a variable is defined, a memory location is also reserved for the variable. The size of memory location reserved for variable depends upon the data type of variable.

5. **What is the value of Y after the following code executes:**
float Y=3.4+SQRT (25.0) **(2 Times)**

Ans: 8.4

6. **Give some examples of valid variable names.**

Ans: In C language there exist some rules to declare a variable. Valid variables are the names which are according to these rules. The words marks, average grade and salary are valid variable names.

7. **Describe variable declaration.**

Ans: Specifying the variable names and their data types in the program is called declaration of variables. It means that all variables must be declared before they are used in the program. The compiler gives an error if an undeclared variable is used in a program. i.e.

int a; 'int' is a data type and 'a' is the name of a variable.

8. **Define character constant.** **(2 Times)**

Ans: A single character or digit or special character written between single quotes is called character constant. It means that the maximum length of character constant is 1 character. For example 'A', 'I', 'x', 'y', '=' and '9' are character constant.

9. **Trace the error.**

```
Int a= 6
++a;
Printf("%f',a)
```

Ans: 3 errors

1. int a=6 should terminate with a semicolon ';'.

2. Printf("%f',a) should also terminate with a semicolon ';'.
3. Y.d should be used in place of F.

10. Distinguish between a constant and a variable.

Ans:

Constant	Variable
A constant is a quantity that can not be changed during programme execution.	A variable is a named memory location or memory cell. The value of variable may be charged during the execution of programme. However, the name of variable cannot be changed.

1. What is compound assignment operator?

Ans: An assignment statement that assigns a vale to many variables in known as compound assignment statement. The assignment operator is = is used in these statement.

2. Define increment decrement operators.

Ans: **Increment operators:** The prefix increment operator is used to decrement the value of a variable by 1. It is unary operator and works with single variable. In prefix form, the increment operator is written before the variable like ++y.
Decrement operator: The operator that is used to subtract 1 from the value of a variable is called decrement operator. It is represented by - - (double minus sign). It is a unary operator. It is applied to a single variable only. i.e. y- -.

3. What is the use of AND operator? (2 times)

Ans: The symbol used for AND operator is (&&). It used to evaluate two conditions. It produces true if both conditions are true. It produces false result if any one condition is false.

4. Trace the Output

```
int number =6;
int x=0;
x=--number;
Print f ("%d",x);
```

Ans: 5

5. What happens when arithmetic under flow occurs?

Ans: The arithmetic underflow occurs when arithmetic calculation is performed on very small two variables. The result may be too small to be represented in a particular variable. Thus result may be represented as zero in this situation.

6. Define variable. (2 Times)

Ans: A variable is a named memory location or memory cell. It is used to store program input data and its computational results during execution. The value of a variable may be changed during execution.

7. Find the errors in the following code:

```
#include<std 10.h>
void main (void)
{
Intx,y,z
Z=x+y+z
}
```

Ans: 3 errors
stdio.h spell is not correct.
Int x,y,z should terminated with ';'. I.e. Int x,y,z;
Z=x+y+z should terminated with ';'. Z=x+y+z;

8. Identify the errors in the following lines. (2 times)

```
Integer A=2+3;
Float B=5;
Int C=A+B;
```

Ans: 1 error
Integer is not any datatype in C. it should be like this **Int A=2+3;**

19. Describe the Identifier. **(2 Times)**

Ans: Identifiers are the names used to represent the variables, constants, type functions and labels in the program. It is an important feature of all programming languages. A good identifier name should be descriptive but meaningful.

20. Trace the error in the following Code:

```
int x=10  y= 15;
x= x++
y = ++y;
print f ("% d % d", x,y);
```

Ans: 2 errors

1. There should be int x= 10; ',' between int y=15 y=15; i.e. int x=10,y=15;
2. X=x++ should be terminated with semicolon. i.e. x=x++;

21. Predict the output of the following code:

```
int number =6;
++ number;
Print f("%d\n",number);
```

Ans: 7 . It will be in next line due to use of /n.

22. Differentiate between string constant and character constant. **(3 times)**

Ans:

String constant	Character constant
A set of characters written within a double quotation is known as string constant. i.e. "Pakistan", "123" etc.	Any character written within a single quotation is known as character constant. i.e. 'a', '$', '=' etc.

23. List any four types of Integer data in C-Language. **(3 times)**

Ans: 1. Int 2. Short int 3. Long int 4. Unsigned int.

24. Differentiate between implicit and explicit type casting. **(3 times)**

Ans:

Implicit casting	Explicit casting
Implicit casting is performed by the c compiler automatically. The operands in arithmetic operations must be of similar types. If types are different then the lower data type operand will automatically convert to high data type.	Explicit casting is performed by programmer. It is used by using cast operator. The cast operator tells the compiler to convert the data type of a value. i.e. (type) expression;

25. Predict the output of the following

```
void main ( )
{
Int x=1;
x++;
printf ("% d', x);
}
```

Ans: 2

26. Define keywords.

Ans: keyword is a word in c which has predefined meaning and purpose in c language. The meaning and the purpose of the keyword is defined by the developer of the language that cannot be redefined or changed by the user.

27. What do you mean by assignment operator? **(2 Times)**

Ans: The assignment operator = is used in assignment statement to assign a value computational result to a variable. The name of the variable is written on the left side of the assignment operator and value is written on the right side.

28. List two types of Identifiers in C.

Ans: 1. Standard identifiers 2.User defined identifiers

29. How are Characters Stored?

Ans: The characters are stored in ASCII code form. ASCII stands for AMERICAN STANDERD CODE FOR INFORMATION INTERCHANGE. The ASCII code values are used when they are added, subtracted and compared.

30. Why is it important to assign a data type?

Ans. Data type tells the compiler, how much space a variable will take in memory and what type of contents it will store. So it necessary to assign data type so that compiler should know about space and content can catch error easily.

31. What is statement terminator?

Ans. ' ; ' is a statement terminator. It tells the compiler that specified statement has been ended.

32. Write the use of turbo c++?

Ans. It is used to create, edit and save programs. It is also used to debug a program. It has a powerful debugger.

33. Name data type use to store use to store real data?

Ans. Float, double are used to store real data.

34. Write a shortcut key to run.

Ans. CTRL+F9

35. Write legal character for identifiers?

Ans. Only Alphabets, numbers and underscore can be used as identifier.
First letter should be alphabet or underscore.

36. Why does integer overflow occurs?

Ans. It occurs when we give addition or multiply large values. That increase in result of the value. So value will increase. Then the maximum range of data type. In this way integer overflowed.

37. Find the Error.

```
void main ()
{
Int c=7
Printf("%d",C:
}
```

Ans: i. Statement termination semi colon (;) is missing after int c=7
ii. Closing parenthesis is missing after print ("%d",c;

38. Write the use of operators.

Ans. Operators are used to perform certain operations on data. For example

- arithmetic operators are used to form arithmetic operations.
- Logical operators are used to specify multiple conditions.

39. What is the use of assignment, statement?

Ans: A statement that assigns a value to a variable is known as assignment statement. The assignment operator (=) is used in assignment statement to assign a value to a variable.

40. Differentiate between unary and binary operators.

Ans.

Unary operator	Binary operator
A type of operator that works with one operand is called unary operator, some unary operators are -,++,-- e.g –a; x++;--y;	A type of operator that works with two operands is called binary operator. Some binary operators are +,-,*,/,% e.g a+b; x.y

41. List four keywords in C language. **(2 Times)**

Ans. (i) if (ii) for (iii) while (iv) int

42. Write about data type in C.

Ans. The data type spacifies the type of data that can be stored in a variable. It also defines a set of operations on the data. Each data type has a range of values and requires different amount of memory.

43. How does cancellation error occur?

Ans. The cancellation error occurs when very large and very small floating numbers are manipulated. The manipulation may show unexpected result. The larger number may cancel out the smaller number when both numbers are added.

44. Describe variable initialization. **(2 Times)**

Ans. The process of assigning a value to a variable at the time of declaration is known a variable initialization. The equal sign = is used to initialize a variable. Variable nam is written on left side and the value is written on the right side of equal sign.
Syntax: type name_variable = value

45. What is garbage value.

Ans. The computer automatically allocates the required memory for the variable wh it is declared. The memory location may already contain some data that meaningless for the program. This meaningless data is known as garbage value.

46. What is the output?

```
printf("%c",67);
```

Ans. C

47. Find errors of C code.

```
Int a=10 , b=40
printf("sum; "a+b)
```

Ans.
i. Statement terminator ; is missing after first statement.
ii. Print is wrong use printf for output.
iii. Semicolon is missing after print statement.
iv. In prinf statement, closing double quotation mark is wrong it should be

```
printf ("sum=" ,a+b);
```

48. What is ternary operator?

Ans. The ternary operator is an operator that takes three arguments. The fi argument is a comparison argument, the second is the result upon a tr comparison and the third is the result upon a false comparison.

49. Write output of the code.

```
float f = 3.1415;
printf("%7.2f",f);
```

Ans. 3.14.

50. Enlist all relational operations in C.

Ans.
- > (greater than operator)
- < (less than operator)
- == (equal to operator)
- >= (greater than equal to operator)
- <= (less than equal to operator)
- ! (not equal to)

51. What is the output of the following code.

```
Int n=10;
n%= 2;
n+=5;
printf("%d",n);
```

Ans. 5

52. Find errors in the following code.

```
#include<stdio.h>;
VOID main ()
{
Printf("Hello c")
}
```

Ans.
(i) There should be no semicolon after # include<stdio.h>
(ii) VOID should be written in small letters i.e void.
There should be semicolon after printf statement.

53. Write a statement to declare an integer variable i initialized to 10?

Ans: int i=10;

54. Determine the output

```
Int number = 6;
Printf ("%d\n", number++);
```

Ans: 7

55. Find the errors:
int n = 4.2

Ans: i) The int in the line must be replaced with float according to value
ii) The line must end with semicolon

56. Rewrite the expression n++; without using the operator ++?

Ans: n = n+1;

57. What will be the output of the following?

```
int number = 6;
int x = 0;
x = number--;
printf ("%d\n", x);
```

Ans: 6

58. Find errors in the following code segment:

```
int a b;
a = 10
b = 5;
printf ("a+b=%c", a+b);
```

Ans: i) The variables a and b in first line must be separated with comma
ii) The second line must end with semicolon
iii) The format specifier %c in the last line must be replaced with %d

59. How string value is displayed in C-language?

Ans: A collection of characters written in double quotations mark is called string and string constant. It may consist of any alphabetic characters, digits and special symbols. String values displayed on the screen by using printf () function or puts function.

60. Find errors in the following code segment:

```
int a b;
a == 10;
```

Ans: i) The variables a and b in first line must be separated with comma
ii) The == operator in second line must be replaced with =

61. Write a C-statement to initialize three integer variables named A, B and C and assign them the values 10, 20 and 30 respectively.

Ans:
```
int A = 10;
int B = 20;
int C = 30;
```

62. What is compound condition? Give an example

Ans: A type of comparison in which more than one condition are evaluated is called compound condition. It executes a statement or set of statements by testing many conditions. An example of compound condition is (a > 50 && a < 100).

63. How an arithmetic overflow occurs?

Ans: The arithmetic overflow occurs due to the manipulation of two very large numbers. The result may be too large to be represented when two very large numbers are manipulated. For example, an overflow will occur if an integer variable is assigned value more than 32767.

64. Find errors:

```
include <stdio.h>
void main (void)
{
 int x = 3
printf ("%d", x);
}
```

Ans: i) The word "include" in first line must start with #
ii) The fourth line must end with semicolon

65. Predict the output of following code segment:

```
int x = 7;
int y = 3;
printf ("%d and %d", x/y, x%y);
```

Ans: 2 and 1

66. Initialize three variables T1, T2 and T3 in a single line by assigning values 48, 45 and 39 respectively:

Ans: int T1= 48, T2= 45, T3= 39;

67. What will be the output of following code segment?

```
int m = 7;
int y = 3;
printf ("%d", m%y);
```

Ans: 1

68. Find errors in the following code segment:

```
Void main ()
{ int x=5
int y;
y= x+3;
printf ("%d, y);}
```

Ans: i) The second line must end with semicolon

ii) The format specifier "%d" in fifth line must enclosed in double quotation marks

69. Write a statement to declare an integer variable i initialized to -1?

Ans: int i=-1;

70. Determine the output of the following code:

```
int b = 9;
b = b/2;
printf ("%d", b);
```

Ans: 4

71. What is arithmetic expression?

Ans: A type of expression that consist of constants, variables and arithmetic operators is called arithmetic expression. These expressions are used to perform arithmetic expressions.

72. Find errors in the following code:

```
Void main ()
{
Int c=7
Printf ("%f", C;
}
```

Ans: i) The word "Void" in the first line must be written in lowercase

ii) The third line must end with semicolon

iii) The variable C in fourth line must be written in lowercase

iv) The fourth line is missing closing bracket) before semicolon

73. Declare two integer variables x and y in one declaration statement?

Ans: int x, y;

74. Determine the output of the following code:

```
int x, y = 6;
x = y++;
printf ("%d", x);
```

Ans: 6

75. Find errors in the following code:

```
int a
Printf ("%d" a);
```

Ans: i) The first line must end with semicolon

ii) Variable "a" must be initialized to some integer value in order to display some result

iii) In second line a comma must be placed between "%d" and "a"

OBJECTIVES (MCQ'S) OF CHAPTER-10 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. ________ not a valid escape code:
(A) /t (B) /r (C) /y (D)/f

2. The escape sequence for back slash is: **(6 Times)**
(A) / (B) /b (C) \\ (D)/t

3. Which escape sequence can be used to begin a new line in C? **(4 Times)**
(A) /a (B) b (C) \n (D) m

4. Format specifier symbol is started with the symbol of: **(3 Times)**
(A) @ (B) % (C) $ (D)#

5. Which of the following is not ternary operator?
(A) ++ (B) + (C)-- (D)?

6. The function getch ( ) is defined in: **(2 Times)**
(A) stdio.h (B)string.h (C) math.h (D)conio.h

7. The format specifier % μ is used for **(2 Times)**
(A) integer (B) unsigned short
(C) unsigned float (D)unsigned decimal integer

8. The function getche ( ) is found in
(A) stdio.h (B) string.h (C) conio. h (D) math. h

9. The value of C expression 5/9*2 is:
(A) 0.27 (B) 1.11 (C) 0 (D) 2

10. Which of the following format specifiers is used for string? **(2 Times)**
(A) % f (B) % d (C) % c (D) % s

11. Which of the given is not a valid escape sequence
(A) /t (B) /r (C) /y (D) /f

12. Which of the following function is used to output data in C programs?
(A) Printf (B) Getch (C)Getche (D) Scanf

13. An ampersand before the name of a variable denotes: **(2 Times)**
(A) Actual value (B)Variable name (C)Address (D) Data type

14. The format specifer used for floating point values is:
(A) % u (B) % i (C) %d (D) % f

15. The escape sequence used to move cursor one character back is:
(A) /b (B) /t (C) /n (D) /r

C-language

16. The escape sequence for carriage return is:
(a) \a (b) \c (c) \r (d) \f

17. Function which used to get input from the user:
(a) printf( ) (b) clrscr( ) (c) scanf( ) (d) puts( )

18. How many variables can be used in one print function?
(a) One (b) Two (c) Ten (d) Many

19. The function that is used to display output on screen is called: **(2 Times)**
(a) Scanf (b) pow (c) display (d) printf

20. In Switch Statement, the Case Block ends with:
(a) end (b) stop (c) break (d) abort

21. Format specifier is started with symbol
(a) ? (b) & (c) % (d) *

22. The format specifier % f is used for:
(a) int (b) long (c) double (d) float

23. If $x=2$ and $y=3$, what will be the output of the expression: $x>y?x+y:x*y;$
(a) 6 (b) 5 (c) 12 (d) 10

24. Which of the following format specifiers is used for character data type?
(a) %d (b) %s (c) %c (d) %e

25. **The functions used for input and output is stored in:**
(a) Stdio.h (b) Conio.h (c) Math.h (d) Inout.h

26. **An escape sequence begins with a character:**
(a) \\ (b) \ (c) / (d) //

27. **Which character signifies the beginning of an escape sequence?**
(a) { (b) // (c) * (d) \

28. **The general form of format specified for floating point value is:**
(a) % m.nf (b) m.n% (c) m%.nf (d) m.n%f

ANSWERS

1	2	3	4	5	6	7	8	9	10
C	C	C	B	D	D	D	C	B	D
11	12	13	14	15	16	17	18	19	20
C	A	C	D	A	C	C	D	D	C
21	22	23	24	25	26	27	28		
C	D	A	C	A	B	D	A		

SHORT QUESTIONS OF CHAPTER-10 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. **What is the use of ampersand (&) in scanf function?**
Ans: The ampersand (&) refers to the memory location of the variable in which input is stored. It is placed before variable name is also called address operato

2. **Trace the output:**
```
{
Float f=3.2413;
Printf("f=%3.3f",f);
}
```
Ans: 3.241

3. **Find Error:**
```
{
Int I = 5;
Printf("%d",i);
}
```
Ans: There is one error. i.e. C language is case sensitive. In variable declaration, th is capital I. while small I is displaying in printf statement. Both are different in

4. **Define getch( ) function.** **(5 Times)**
Ans: The getch( ) function is used to input single character from the user. It is abbreviation of 'get character'. When this function is executed, its wait for key to be pressed. The character entered by the user is not displayed on screen.

5. **Trace the errors in the following code:**
```
void main ( );
{
Printf ('pak');
}
```
Ans: 2 errors
1. There should no ; after void main().
2. String pak should be in " ".

6. **What will be the output of the following:** **(2 Times)**
```
printf("55/t");
printf("555");
```
Ans: 55 555

7. How are comments added on multiple liens?

Ans: Comments on multiple lines are added by using "/*" and "*/" symbols. You can write comments between these two lines. i.e.

```
/*----------- comments
In multiple lines
------------------------*/
```

8. Write C statement to print the value of unsigned long x. (2 Times)

Ans:
```
Unsigned long int x;
Printf("enter the value of x");
Scanf("%d",&x);
Printf("x=%d",x);
```

9. State Relational Expression.

Ans: Relational expression is a statement that uses relational operators to compare two values. Examples of relational expression are A>B, A<B, A<=B, A>=B, A==B and A! =B.

10. Describe clrscr ( ) function.

Ans: This is used for clearing the output screen i.e console. It is abbreviation of "clear screen". When this function is executed, the screen is cleared and the cursor blinks on the top-left corner. This function is available in the header file conio.h.

11. Write the output of the following code.

```
Int x=9;
X=x%4;
Printf("/n%d is result ",x);
```

Ans: 1 is result.

12. Trace the output of the following code:

```
{
Intx,y,x;
x=3;
y=2;
z=4;
printf("%d%d%d",x+y,y+5,x+z);
getche ( );
}
```

Ans: 577

13. Trace the error of the following code:

```
void main ( )
{
Int a =10
Printf ("%d",a)
}
```

Ans: 2 errors

1. int a =10 should terminates with semicolon ';'.
2. Printf ("%d",a) should also terminates with semicolon ';'.
3. A and a are different in C so use a in place of H.

14. Define standard output.

Ans: The process of getting something from computer is known as output. The output is mostly displayed on monitor. The term standard output refers to the output displayed on monitor. The result of a program is the output of that program.

15. List some important function for output.

Ans: i. printf( ) ii. Puts ( )

16. Which symbol is used to start format specifier?

Ans: Format specifier are started with the symbol %.

17. Trace output of the following

```
float i= 1.17894;
printf("2.2f",i);
```

Ans: 1.18

18. Trace the output

```
void main ( )
{
Printf("55/t");
Printf ("666");
Printf ("/n 777");
}
```

Ans: 55 666
777

19. Trace the errors in the following code:

```
void main ( ) ;
{
Inta,b;
A = -10;
b = 40
b = a
printf("Result = %f",b);
getch ( );
}
```

Ans: 4 errors.

1. b=40 should be like b=40;
2. b=a should be like b=a;
3. there should no semicolon after void main().
4. % f should replace with % d

20. Predict the output: **(2 Times)**

```
{
Printf ("*/n**/n***);
}
```

Ans:

```
*
**
***
```

21. Trace the error in following code:

```
float r:
clrscr ( ) ;
printf("Enter radius");
scanf("%f,r);
```

Ans: 3 errors

1. Float r: should be like this **float r;**
2. There should be a format specifier in scanf statement i.e. **scanf("%f,&r);**
3. double Quotes hould use i.e Scanf("%f", r)

22. List some important function for input **(4 Times)**

Ans: scanf ( ) gets ( )
Getch ( ) getche( )

23. List out different types of format specifier. **(2 Times)**

Ans:
i. Integer format specifier
ii. Character format specifier
iii. Floating-point format specifier

24. Trace the error in following codes:

```
include<stdio.h>
void main vaid
{
Printf("%c", :Pakistan");
getch ( );
}
```

Ans: 3 errors

1. There should be # sign before header file. i.e. **#include<stdio.h>**

2. Vaid spell are not correct. They should be like this 'void' & they should be in ( )
3. There should not format specifier in print statement. i.e. Printf("Pakistan");

25. Trace the error in the following code.

```
#include <stdio.h>
Voi main (void)
Printf("Hallow world")
```

Ans: 3 errors

1. Spell of void is not true. It should be like this Void main (void)
2. The starting braces after main function is missing.
3. Print statement should be terminated with semicolon. Printf("Hallow world");

26. Define the format specifier used in printf( ) and scanf( ) functions.

Ans: Format specifier is used to specify the format according to which values will be read and displayed. It determines the data type of variable, field width and format of the value. It is denoted by '%' sign.

27. Trace the output

```
#include<stdio.h>
Void main (void) {
Int x = 10;
Printf("%d", x%2);
```

Ans: 0

28. Trace the output

```
#include <stdio.h>
Void main (void)
{
Int x = 1;
Int y = 2;
x = x+1;
y = y+x;
printf("%d/n%d",x,y);
}
```

Ans: 2
4

29. Trace the errors in the following code.

```
#include<stdio.h>
Void main (void)
{
Int x= 4
Y = x+10
Printf("%d",x+y);
}
```

Ans: 2 errors

There should be semicolon after int x=4. i.e. int x=4;
There should also be semicolon after Y = x+10. i.e. Y=x+10;

30. Write down the name of any four escape character provided by C.

Ans:
1. \n is used for insert a new line in output.
2. \t the escape sequence is used to insert a tab in the output.
3. \b is used to insert a backspace in the output.
4. \' is used to insert a single quote in the output.

31. What is standard input?

Ans: The input given by the keyboard is known as standard input. The keyword scanf is used to input data from keyboard. The syntax of standard input is as follow:
Scanf("format _specifier",& variable_name);

32. Find the error in the following code:

```
main ( );
{
Printf("Hellow");
}
```

Ans: 2 error.

1. Main () cannot be used without Void.
2. Main () should not terminated with semicolon (;).

33. Trace the output of the following code:

```
void main ( )
{
Int t=10;
printf("22/t");
printf("666");
}
```

Ans: 2 666

34. Write the syntax of printf ( ) statement. **(2 times)**

Ans: The syntax of printf ( ) statement is as follow:
printf(format/control string, argument list);

35. What is an escape sequence? Give example. **(4 Times)**

Ans: Escape sequences are special characters used in format string to modify the format of the output. These characters are not displayed in the output. These characters always begin with backslash "\". Backslash is known as escape character. i.e. \b, \r, \n etc.

36. Trace the errors in the following code (2 times)

```
#include <std.n>
Void main (Void)
{
Printf('Paksitan');
}
```

Ans: 2 errors

1. Name of header file is not correct i.e. stdio.h
2. String Pakistan should be in " " double quotation.

37. Predict the output of the following

```
void main ( )
{
Int x=1;
x ++;
printf("%d",x++);
}
```

Ans: 3.

38. Predict the output of the following code

```
void main (void)
{
Printf("Hello/"World");
```

Ans: Hello World

39. What is the use of "scanf ( )" function? Write its syntax. OR Define Scanf() function? **(3 Times)**

Ans: Scanf is used to get input from the user. The input is stored in a variable in a specified form. Syntax:
Scanf(format string,&var1,&var2,&var3,.......&var n);

40. Predict the output of the the following

```
int a=9;
a=a % 4;
printf ("/n % d is Result ", a);
```

Ans: 1

41. Trace out errors in the following code:

```
float area , r,
clrscr ( );
print f ("Enter radius);
scan f ("% f" , r);
```

Ans: 2 errors:

1. Variable declaration should close with semi colon. i.e. float area , r;
2. There should be address operator in scanf statement. i.e. scan f ("% f" , &r);

42. Predict the output of the following code

```
void main (void)
{
Printf("World ");
```

Ans: World

43. Find the error in the following code.

```
# include (conio.h);
Include (stdio.h);
Void main ( )
{
Printf("OK");
}
```

Ans: 2 errors

1. First header file should not terminate with semicolon.
2. There should be '#' before the second header file and shouldn't terminate with semicolon. i.e. #Include (stdio.h)

44. Find the ouput of following code.

```
Int a,b,c;
a=b=c=6;
a=4;
b=a;
c=2;
Printf("%d%d%d",a,b,c);
```

Ans: 442 mean 4 4 2

45. Find the output of the following code.

```
Printf("Pakistan/n Is an/n Islamic /n country");
```

Ans: Pakistan
Is an Islamic country

46. Find the error in the following code

```
void main ( );
{
Print(OK)
}
```

Ans: 3 errors

1. There should not semicolon after main function.
2. Print is not any keyword in C. it should be printf.
3. Printf(ok) should terminated with semicolon';'.

47. What is the control string in printf function?

Ans: control string is a message display in the prinf statement. It usually give the message to the user to input or output data on screen. i.e.

Printf("your marks are %d and grade is %c",m,g);

The message "your marks are %d and grade is %c" is format string.

48. Trace the errors in the following code:

```
#indclue (std10.4)
void main (void);
{
x=5;
y=6;
z=x+y
printf("%d", z);
```

Ans: 3 errors

1. Name of header file is not correct. It should be stdio.h.
2. Void main should not terminate with semicolon.

3. Z=x+y should terminate with semicolon. i.e. z=x+y;
4. Variables are not declared

49. Write output of the following code:

```
Int x= 4* 5/2 +9;
Print f ("%d";x);
```

Ans. 19.

50. Trace the error in the following code.

```
Void main( )
{
x=20;
y=40;
x+y=z
print f f(%d" ; z)}
```

Ans.
i. Variable x,y,z are not declared.
ii. Semi colon is missed after printf statement.
iii. Double quotation mark is missing before %d.

51. Write the output of the following code.

```
Int a,b,c;
a=5;
b=10;
c==a+b;
printf ("The sum of a+b=%d",C);
```

Ans. The sum of a+b=15

52. What is the purpose of f gets ( ) function.

Ans. It is used to input string value from the user. The input is stored in a strin variable. The user can enter any types of data.

53. Compare getch ( ) and getche ( ) functions. OR getche() function? (2 Times)

Ans.

Getch ( ) function	Getche ( ) function
This function is used to input single character from user. It is an abbreviation of get character. When it is executed the character entered by user is not displayed on screen.	This function is also used to input single character from user. It is also an abbreviation of get character. But when it is executed the character entered by user is displayed on screen.

54. Trace output of the following code.

```
int x=0 , y=5 , x=4;
x=y+z*5;
printf("Result = %d",x);
```

Ans. Result = 25

55. Find error in the following code:

```
Void main ( ) ;
{
Print ("Pakistan");
}
```

Ans.
i. Semicolon after void main ( ) is wrong. No semi colon exists after void main ( ) in C Language.
ii. There should be printf instead of print.

56. Trace output of the following code.

```
Int a = 5 , b=10;
Int c = a+b *2;
Printf ("The output is %d",c);
```

Ans. The output is 25.

57. Trace the errors in the following code:

```
#includes<stdio.h>
void Main ();
{
Printf ("Hello World");
}
```

Ans.
i. Write include instead of includes.
ii. M should be small in Void Main ( ).
iii. There should be no semi colon after void main ( ).

58. Determine the output.

```
Char w1,w2,w3;
w1= 'A' ;
w2 ='B';
w3='c';
printf("%cw2%c",w1,w3);
```

Ans. AW2C.

59. Determine the output.

```
Int x= 3;
Printf("%d%d", x,2*x);
```

Ans. 36.

60. Write the output.

```
Float f=3.14159;
printf("8.4f"f)'
```

Ans. _ _ 3.1416

61. Find out two errors from following code.

```
If (x==y)
Printf("hello")
```

Ans.

- Braces are missing.
- Statement termination (;) semicolon is missing.

62. Find output from following code.

```
int price = 10;
if (price==10)
{printf("%d",price);
}
```

Ans. 10

63. Write output of the following code.

```
Int n=5;
printf("%,d%d",2 x x,3 x x);
```

Ans. 1015.

64. Write output of the following code.

```
int a,b,c;
a = 15;
b=10;
c=a+b;
printf("c=%d",-c);
```

Ans. 24

65. Find errors in the following code.

```
#include<stio.h>
Void main ( )
{
Int x = 10,y=13;
x = ++y;
y=x++;
printf("%d%d",x,y);
}
```

Ans. i. In line 1, Stio.h is wrong. It should be stdio.h
ii. In line 2, Void is wrong. It should be void because is case sensitive.

66. Name any four format specifier provided by c.

Ans.

i	%d	Used for signed decimal integer value
ii	%f	Used for signed float or double value.
iii.	%c	Used for character value.
iv.	%s	Used for strings.

67. Describe\ n Escape sequence.

Ans. This escape sequence is used to insert new line in output. For example pri ("555\n");
printf("55");
output will be
555
55

68. Determine the Output:
Print f ("777\n");
Print f("77");

Ans. 777
77

69. Determine the Output:
int num = 10;
num * =5;
print f("%d", num);

Ans. 50

70. Find the Errors:
void main ( ) ;
{
int x=5;
print f ("%d",x);
}

Ans. i. There should be no semicolon (;) after void main ( )
ii. There should be no space int x=5;
iii. There should be no space between print and f.

71. What is the output of following code?

Ans. Char Ch 1 = 'A';
Ch 1+2=2;
Printf ("%C", Ch1);

Ans. A+2

72. Find Errors in the following code
Void main ()
}
Float n1=3.5, n2=4.1;
printf("%d\t%d",n1,n2);
{

Ans. i. C is case sensitive so there should be void instead of Void.
ii. Braccs for open and close are wrong.

73. What is format specifier?

Ans. Format specifier is used to specify the format according to which values will be re and displayed. It determines the data type of variable, field width and format of t value. It is started with the % symbol. Different format specifiers are:

%d : used for signed decimal integer
%f : used for signed float value
%c : used for character value

74. What is output of the following code?

```
int x,y=5;
x=y++;
printf("%d\n%d",x,y);
```

Ans. 5
6

75. Write the code to input a value for an integer n?

Ans: scanf ("%d", &n);

76. Write a single C- statement to print the following output?

Hello to
The World of
C Programming

Ans: printf ("Hello to \n The World of \n C Programming");

77. Define standard output?

Ans: The process of getting something from computer is known as output. The output is mostly displayed on the monitor. The term standard output refers to the output displayed on monitor. The result of the program is the output of that program.

78. Determine the output:

```
printf ("Hello \n World \n Pakistan");
```

Ans: Hello
World
Pakistan

79. Determine the output of the following code:

```
int N= 65;
printf ("%c", N);
```

Ans: A

80. What is the output of following code segment?

```
float f = 1.34129;
printf ("f= %7.3f", f);
```

Ans: f = 1.341

81. Write a single C- statement to print the following text?

Hello to
The World of C

Ans: printf ("Hello to \n The World of C");

82. Determine output of the code:

```
int x = 15;
int y = 5;
printf ("%d \t %d", x%y, x/y);
```

Ans: 0 3

83. Determine the output of following code?

```
int a = 10;
int b = 12;
int c;
c=a+b;
printf ("c=%3d", --c);
```

Ans: c 21

84. Find errors in the following code segment:

```
void main (void);
{int c=7
Printf ("%f", c;
}
```

Ans: i) The semicolon at the end of first line is invalid
ii) The semicolon is missing at the end of second line
iii) The format specifier "%f" must be replaced with "%d" in third line
iv) The closing bracket) is missing after the variable c in third line

85. Differentiate between printf and scanf function?

Ans: The printf function is used to display different values on the screen. It can display text, constant or values of variables in specified format. The scanf function is used to get different types of inputs from the user. The input is stored in variables in specified format.

86. Write a C- statement which scans three floating point variables a, b and c in a single line?

Ans: scanf ("%d %d %d", &a, &b, &c);

87. Determine the output of the following code:

```
float f = 3.14159;
printf ("f= %4.2f", f);
```

Ans: f = 3.14

88. Determine the output of the following code:

```
float f = 6.3159;
printf ("f= %3.2f", f);
```

Ans: f = 6.32

89. Write the purpose of "%c" format specifier?

Ans: Format specifier "%c" is used for single character values.

90. Rewrite the code after correction?

```
float f = 3.14
printf ("%d", f;
```

Ans: Correct code is:

```
float f = 3.14;
printf ("%f", f);
```

91. What is the output of following code segment?

```
printf ("%.3f", 1.2);
```

Ans: 1.200

92 Write a single printf statement to display the following text:

C:\My documents

Ans: printf ("C:\\My documents\");

93. What will be the output of following code?

```
printf ("Book\n Reading\t is good habit");
```

Ans: Book
Reading is good habit

OBJECTIVES (MCQ'S) OF CHAPTER-11
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. How much a conditional operator takes operand?
(A) 4 (B) 3 (C) 2 (D)1

2. In if statement, false is represented by **(5 Times)**
(A) 0 (B) 1 (C) 2 (D) 3

3. When a relational expression is false, it has the value: **(2 Times)**
(A) zero (B) one (C) less than 0 (D) two

4. Which of the following is used for making two way decision? **(3 Times)**
(A) if-else (B) if (C) nested if (D) switch

5. Another term for a computer making a decision is: **(2 Times)**
(A) sequential (B) selection (C) repetition (D) ineration

6. Which programming structure makes a comparison : **(4 Times)**
(A) Relational (B)Repetition (C)Sequence (D) Decision

7. Relational operators allow you to ________ numbers. **(4 Times)**
(A) Add (B)Compare (C)Multiply (D) Divide

8. Which programming structure executes program statements in order? (4 Times)
(A) Sequence (B)Repetition (C)Decision (D) Relation

9. Which of the following is equivalent to (P>=q)? **(2 Times)**
(A) P<q (B) ! (P<q) (C) P>q (D) !P<q

10. The case block ends with: **(5 Times)**
(A) end select (B)end case (C) break (D)case else

11. The conditional operator is an alternative of: **(2 Times)**
(A) If (B) if else (C) Nested if (D)None

12. What will be the output of : (6>7)? Print f("ABC"): printf("XYZ");?
(A) ABC (B)XYZ (C) ABC XYZ (D)XYZ ABC

13. Which is an example of multiple branches from single expression:
(A) if statement (B) switch statement (C) while loop (D) for loop

C-language

14. Which keyword is not used in switch statement? **(11 times)**
(a) default (b) if (c)case (d)switch

15. An expression that uses a relational operator is known as: **(12 times)**
(a) Serial Expression (b) Arithmetic Expression
(c) Relational Expression (d) Sequential Expession

16. Which is the simplest selection structure? **(11 times)**
(a) if (b) switch (c)if-else (d)Nested-if

17. What operators are used to join two or more conditions? **(11 times)**
(a) Relational (b) Logical (c) Assignment (d) Comparison

18. In If statement, true is represented by: **(11 times)**
(a) 0 (b) 1 (c)2 (d)3

19. Relational operators allow you to ....number: **(11 times)**
(a) compare (b) add (c)multiply (d)divide

20. For A=4 and B=4 which expression evaluates as true?
(a) + (b) = (c) == (d) +=

21. The three programming structures are:-
(a) Sequence, Decision, Repetition (b) Process, Decision, Alternation
(c) Function arguments (d) Relation, Comparison, process

22. Switch statement is an alternative of **(2 Times)**
(a) nested if-else (b) if-else (c) for loop (d) while loop

23. Which operator in C is called a ternary operator **(2 Times)**
(a) if (b) if (c) ++ (d) ( )

24. Another term for conditional operator, **(2 Times)**
(a) ternary (b) binary (c) byte (d) for

25. Conditional operator takes:
(a) one operand (b) two operands (c) three operands (d) four operands

26. The case block ends with:
(a) End select (b) End Case (c) break (d) Case Else

27. An if statement inside another if statement is called:
(a) If statement (b) if-else statement (c) Nested if statement (d) Switch Statement

28. The Operators to compare operands and decide if the relation is true or false:
(a) Arithmetic Operators (b) Logical Operators
(c) Relational Operators (d) Syntax Operators

29. What does a compound condition use to join two conditions?
(a) Relational Operator (b) Relational Result (c) Logical Result (d) Logical operator

30. Graphical representation of a program is called:
(a) Logical chart (b) Binary chart (c) Flow-chart (d) E-R chart

ANSWERS

1	2	3	4	5	6	7	8	9	10
C	A	A	A	B	A	B	A	B	C
11	12	13	14	15	16	17	18	19	20
B	B	B	B	C	A	B	B	A	C
21	22	23	24	25	26	27	28	29	30
A	A	C	A	C	C	C	C	D	C

SHORT QUESTIONS OF CHAPTER-11 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Define selection structure enlist its different types. (2 Times)

Ans: A selection structure selects a statement or set of statements to execute on the basis of a condition. There are two types of selection structures. These are as follows:
i. if-else
ii. switch-case structures.

2. What is switch ( ) structure?

Ans: Switch statement is another conditional structure. It is good alternative of nested if-else if statements can be used easily when there are many choices available and only one should be executed.

3. Amount = (x>y)? x y : x+y; convert this statement with conditional operator to an equivalent if-else statement. (2 Times)

Ans:
```
If (x>y)
{
amount = x* y;
}
else
{
amount = x+y;
}
```

4. Write an expression C-language for the following: number is divisible by 3.

Ans: if (n%3 = =0).

5. Write an expression in C language for "Numeric is divisible by 5".

Ans: if (n%5==0).

6. Define Control structure. (6 Times)

Ans: Control structure is a structure which is used to control the flow of execution of the program. The basic control structures for writing programs are sequence, selection and repetition.

7. What will be output of the following:
```
int x=5, y=10;
if (x>y)
y=2;
y=y+1;
printf("value of y= %d",y);
```

Ans: value of y 11

8. Trace the error in the following:
```
void main( )
{
Inta,b;
a= -10
a= 40
if (a<0);
b= sqrt(A);
printf ("Result = %f',b);
getch( );
}
```

Ans: 5 Errors
1. a=-10 should be terminate with semicolon (;).
2. a=40 should also terminates with semicolon (;).
3. There should no semicolon after **if** statement.
4. In printf statement ending "is missing.
5. There should h space between a,b,

9. What happens if break is missed in case of block? (4 Times)

Ans: If break is not used, all case blocks coming after matching case will also be executed. Which will take more time to execute a program.

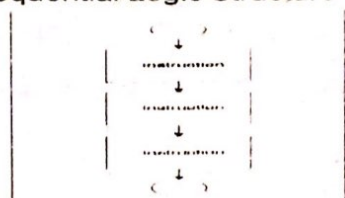
10. What is the output of the following code?

```
Int x=1;
Int y= 2;
z = 3;
if (x==y) || (y==z) || (z ==2)
printf ("Yes")
else
printf("No")
```

Ans: No

11. Define sequential structure. OR How instructions are executed in sequence structure? (2 Times)

Ans: In sequence structure, the instructions are executed in the same order in which they are specified in the program. The control flows from one statement to other in a logical sequence. i.e.

Sequential Logic Structure

12. Write the syntax of "Switch" statement.

Ans:

```
switch (expression)
{
case val 1:
statements;
break;
case val 2;
statements;
break;

:
case val n:
statements;
break;
default:
statements;
}
```

13. What is the output of given code?

```
Int b=6, c= 5;
If (b++==7&&++c=5)
{
printf("d/n",++b)
}
```

else
printf("%d/n",b--);

Ans: 5

14. Write syntax of conditional structure. **(2 Times)**

Ans: (condition)? True-case statement: false-case statement;

15. Write syntax of if-else statement.

Ans:
```
if (condition)
statement;
else
statement;
```

16. Trace the errors in the following code.
```
Void main ( ); {
Int a=2
 If (a=1)
Printf ("OK")
else
printf("Cancel")
getch ();}
```

Ans: 5 errors

1. There should not semicolon after void main ().
2. Int a=2 should terminated with semicolon i.e. int a=2;
3. Printf("ok") should also terminated with semicolon. i.e. Printf ("OK");
4. printf("Cancel")should also terminated with semicolon. i.e.printf("cancel");
5. if (a = 1) should be If (a==1)

17. What is the output of the following code.
```
int m,n;
m=0;
n=m;
if(m==n)
printf("BWP");
else
printf("LHR");
```

Ans: BWP

18. Write two rules of using Switch Case in C Program.

Ans: 1. The case label must be integer or character.
2. Each case label must be unique.
3. Switch statements should only have one default label.

19. Trace the errors in the following.
```
Void main ( )
Int x, z;
If (x>y);
Print f ("x is largest")
Else
Print f ("y is largest");
getch ( );
}
```

Ans: 3 errors

1. Starting delimiter is missing.
2. Condition should not terminate with semicolon.
3. There should not space between PrintF.

20. Trace the output of the following codes:
```
Int a=4, b=2, c=5;
If (a>b)
a=5;
If (c==a)
a=6;
```

```
a=7;
printf ("%d",a);
```

Ans: 7

21. Define conditional operator? Write its syntax.

Ans: Conditional operator is decision making structure. It can be used in place of simple if-else structure. It is also called ternary operator as it uses three operands.

Syntax:

(condition) ? true-case statement: false-case statement;

22. Predict the output of the following code :

```
if (4%2= =0)
printf ("Programming makes the life interesting /n");
else
printf("Programming is difficult to learn");
```

Ans: Programming makes the life interesting.

23. Trace the errors:

```
int p=20
if(price= = 20)
price =0;
else
price =2,
```

Ans: 2 errors

1. Int p=20 should terminate with semicolon.
2. Price=2 should also terminate with semicolon.

24. What is compound condition statement?

Ans: A statement in which more than one condition is evaluated is called compound condition operator. It is used to execute a statement or set of statements by testing many conditions.

25. Trace the error in the following code:

```
void main ( )
{
int x=0
if (x=1)
Printf("Hello");
else
printf("Bye);
}
```

Ans: 2 errors

1. Int x=0 should terminate with semicolon.
2. Bye should also close with double quotes. i.e. "Bye".

26. Predict the output for the following code:

```
int a,b,c;
a=10;
b=3;
if(a%b= = 1)
c=0;
else
c=1;
printf("%d"c);
```

Ans: 0

27. Why a default label is used in switch statement? **(4 Times)**

Ans: The default label appears at the end of the all case labels. It executed only when the result of expression doesn't match with any case label. Its use is optional. The position of default label is not fixed.

28. Write output

```
Int p, q,r;
p=10;
```

```
q=3;
If(p%q==3)
r=0;
else
r=1;
prinft("%d",r);
```

Ans: 1

29. Write down the output of following code.

```
char ch='a';
switch(ch)
{
case 'a'
printf("A");
Case 'b';
printf("B");
```

Ans: A

30. What is the error in the following code?

```
int x=10, y=20;
if (x>10&y<30)
printf("%d",x+y);
```

Ans: 1 error: there should be && in place of single & in if statement.

31. What is the use of if-else statement?

Ans: if-else statement can be used to choose one block of statements from many blocks of statements. It is used when there is many options and only one block of statements should be executed on the basis of a condition.

32. What do you know about "If" statement?

Ans: If is a keyword in a C language. If statement is a decision making statement. It is the simplest form of selection constructs. It is used to execute or skip statement or set of statements by checking a condition. Syntax:

```
If (condition)
Statement;
```

33. Find output:

```
int p=3, q=5;
if ((p>q )||(pl =4))
p=p+1;
else
p=p-1
p=p*2;
print f ("p = % d" ,&p);
```

Ans: 8

34. Trace out errors in the following Code:

```
Void main (  )
{
int R;
R=17
If (R>0)
{
R = R*3.14*3.14;
};
Print f ("the value of R is = % f;R);
getch ( ) ;
}
```

Ans: 2 errors:

1. R=17 should terminate with semicolon.
2. Printf ("the value of R is = % f;R); should be like this
   Printf ("the value of R is = % f",&R);

5. Find out errors:

```
# include <Stdio>
Void main (  )
[
If (50>20) then
Printf ("Islamic Country");
Getch ( )
]
```

Ans : 5 errors

1. Name of header file is not correct. it should be <stdio.h>
2. {Should use in place of [.
3. Then should not use after condition because it is syntax error.
4. Getch() should have small g. i.e. getch().
5. } should use in place of].

6. Trace error:

```
Void main ( )
{
int a=2
If (a==1)
Prinf("OK");
Else
Printf("Cancel");
Getct( ) ;
}
```

Ans: 3 errors

1. int a=2 should terminate with semicolon.
2. Else should not have capital E. i.e. else
3. getch should use inplace of Getct().

7. Trace output:

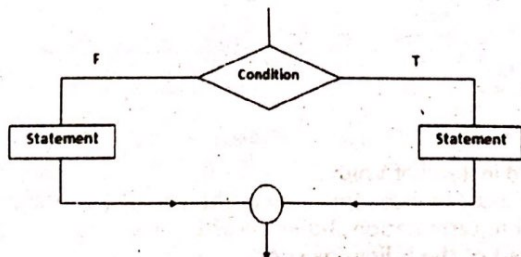
```
int a=5, b=10;
if a>b
printf("Low Triangle");
else
Printf("Huge Triangle");
```

Ans: Huge Triangle

8. How does selection ....

Ans. In selection structure we select a statement by using condition. If condition is true, select that statement otherwise, select other statement. **I-e.**

F Condition T

Statement Statement

9. List any four types of control structure.

I)	Sequential	**II)**	Selection
III)	Repetition	**IV)**	Function call

0. How instructions are executed in repetition structure?

Ans. In repetition structure, instruction will execute until condition is true. When condition is false, instruction will not be executed and control will transfer outside the loop.

41. Define relational operators?

Ans. Logical operators are used for logical operations. i-e. <, >, <=, >=, 1= etc these are used in condition operators.

42. Write three advantages of switch statement in c-language.

Ans: i. The switch statement is alternate is alternative of nested if-else statement.
ii. It can be used easily when there are many choices available and only one should be executed.
iii. The switch construct is useful in the case where selection is based on the value.

43. Determine the output.

```
int x =1,y=2,z=3
if ((x==y)(y==z)(z==2))
print f ("yes");
else
print f ("NO");
```

Ans. i. Starting and closing braces are missing.
ii. or should be replaced by II.

44. Determine the output.

```
int x =50;
int y=25;
if (x%y==0)
printf("Result = %d",x%y);
else
printf ("No result");
```

Ans. Result =0

45. Define nested if statement.

Ans. An if statement within an if statement is called nested if statement. In nested structure, the control enters into the inner if when the outer condition is true.

46. Trace Errors in the following Code

```
void main ( )
{int x=3
int y=4;
if (x<y);
printf("%d",y):
}
```

Ans. i. There should be semicolon after int x=3.
ii. There should be no semicolon after if statement.
iii. After printf statement, colon(:) is wrong. There should be semi colon (;).

47. Write the error from following code:

```
Void main ( ) ;
{int x=10;
if {x==10}
x++
else
x--;
}
```

Ans. i. Use void instead of Void.
ii. There should be not semicolon at the end of void main ().
iii. Statement termination should be after x++.

48. Write the output of the following code.

```
int x,y,z=1;
x=y=3;
if (x==y) || (y<z)
printf("Yes");
else
printf("NO");
```

Ans. Yes.

49. Write output of the following code. **(2 Times)**

```
int p=3 ; int q =5;
if(p>q)
printf("%d",p);
else
printf("%d",q);
```

Ans. 5

50. Determine the output of the following code:

```
if (1!=2)
printf("OK");
else
printf ("Correct it");
```

Ans. OK

51. Trace the output in the following code:

```
If (7!=10)
printf ("Hello")
else
printf("Welcome");
```

Ans. Hello.

52. Find errors.

```
Void main (void)
{
int x=10;
if (x=10)
printf("True");
end if
}
```

Ans.
i. if (x=10) is wrong the correct way is if (x==10)
ii. Void is wrong. The correct is Void().

53. Define compound statement?

Ans: A set of statements written in curly brackets { } after if statement is called compound statement.

54. Convert the following conditional expression into if else statement:

X < 0? y= 10: z= 20;

Ans:

```
if (x<0)
y=10;
else
z=20;
```

55. Determine the output of the following code:

```
if (1! = 2)
printf ("OK");
else
printf ("Correct it");
```

Ans: OK

56. Define condition?

Ans: A condition is an expression that evaluates to true (1) or false (0).

57. Determine the output of the following code:

```
if (1= = 2)
printf ("Hellow");
else
printf ("Correct it");
```

Ans: Correct it

58. Determine the output of the following code segment:

```
int p, q, x;
p= 21; q= 4;
if (p % q == 4)
x= 0;
else
```

```
x=1;
printf ("x= %d", x);
```

Ans: x= 1

59. Write a C- statement using conditional operator that checks the values of tw variables x, y. It assigns the smallest value to the variable "min".

Ans: min = (x < y)? x: y;

60. Determine the output:

```
If (7% 3==0)
printf ("Punjab");
else
printf ("Sindh");
```

Ans: Sindh

61. Find the error:

```
void main ()
{
int y = 10;
IFF (y==5)
Printf ("%d" y);
}
```

Ans: i) The word IFF must be replaced with if

ii) The comma is missing before the variable y in fifth line

62. Write a C- statement that assign 1 to the variable y if the value of variable x i greater than 0. Otherwise, it assigns -1 to the variable y.

Ans:

```
if (x > 0) y=1;
else y = -1;
```

63. What will be the output of following?

```
char c= 'a';
switch (c)
{
case 'a'
printf ("a");
default:
printf ("Not a");
}
```

Ans: aNot a

64. Why break statement is used in a "switch" structure?

Ans: The break statement in each case label is used to exit from switch body. If break i not used, all case blocks coming after matching case will also be executed.

65. Find the output of the following code segment:

```
int x= 10;
(x%2==0 ? printf("Even"): printf ("Odd"));
```

Ans: Even

LONG QUESTIONS OF CHAPTER-11
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Write a program that inputs a character and determines whether it is a vowel o consonant. (2 Times)
2. Write a program in C-Language that inputs a number and finds out whether is even or odd. (2 Times)
3. Write a program in C-Language to accept a year from the keyboard. Find out it is "Leap Year" OR "Not Leap Year.
4. Write a program in C that inputs the number of the month of the year and display the number of days of the corresponding month using if - else - if statement. (e.g if user enters 2, it will display 28 or 29) (2 Times)

OBJECTIVES (MCQ'S) OF CHAPTER-12 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. A loop within a loop is called: (4 Times)
(A) nested loop (B) inner loop (C) outer loop (D)none of these

2. This statement causes a loop to terminate early: (2 Times)
(A) exit (B) terminate (C) break (D) all of these

3. What is the final value of X after executing the following code?
For (int x=0;x<5;x++)
(A) 0 (B) 4 (C) 5 (D)6

4. One execution of loop is known as: (7 Times)
(A) iteration (B) cycle (C)circle (D)duration

5. Which of the following loop is available in C-language?
(A) while-wend (B) for-next (C) sequence (D) do-while

6. While loop is also called: (4 Times)
(A) counter loop (B) conditional loop (C) wend loop (D) ineration

7. A special value that makes the end of a list of input data is called:(2 Times)
(A) terminal value (B) sentinel value (C) loop control value(D) input value

8. Which statement is used to move the control to the start of loop body:
(A) continue (B) break (C) switch (D) default

9. Semi Colon is placed at the end of condition in (4 Times)
(A) switch (B) for loop (C) while loop (D) do-while-loop

10. A loop counter can be defined as :
(A) The final value of a loop (B)A variable that counts loop iterations
(C) The initial value of a loop (D) The step value of a loop

11. If you want a user to enter exactly 20 values, which loop would be the best to use?
(A) while (B) Do-while (C) infinite (D) FOR

12. Which is a loop statement? (4 Times)
(A) if (B)if-else (C) switch (D) for

13. Which of the following is not a loop structure?
(A) For (B) While (C) Switch (D) Do-while

14. A loop that never ends is called:
(A) multiple loop (B) finite loop (C) infinite ioop (D)nested loop

15. Which of the following loop is called counter loop?
(A) for (B) while (C)do-while (D)if

16. How many types of loops structure are available in C? (2 Times)
(A) 4 (B) 3 (C)2 (D)6

C language

17. In while loop, the loop control variable is always initialized? (12 times)
a) outside the program (b) inside the loop body
c) after loop ends (d) outside the body of loop

18. This statement cause the loop to terminate early: (14 times)
a) Break (b) Terminate (c) Exit (d) End

19. A loop which never ends is called:- (2 Times)
a) Running loop (b) Continuous loop (c) Nested loop (d) Infinite loop

20. In which loop the condition comes after the body of the loop: (2 Times)
a) while loop (b) for loop (c) Do-while loop (d) nested loop

21. What is the final values of i after executing the code: for (int i=1;i<5;i+=2)
a) 7 (b) 5 (c) 6 (d) 9

22. What will be the value of x after executing the following code?
```
for (x=1;x<7;x++)
printf("%d",x)
```
a) 5 (b) 7 (c) 8 (d) 1

23. In a 'for' statement, this expression is executed only once.
(a) test (b) initialization (c) validation (d) increment/decrement

24. What is the value of x after executing the code: for (x = 1; x < = 10; x++)
(a) 9 (b) 10 (c) 11 (d) 12

25. This is a control structure that causes a statement or group of statements to repeat.
(a) Decision statement (b) Sequential (c) Loop (d) Logical

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	C	C	A	D	B	A	A	D	B	D	D	C	C
15	16	17	18	19	20	21	22	23	24	25			
A	B	D	A	D	C	B	B	B	B	C			

SHORT QUESTIONS OF CHAPTER-12 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. What is for ( ) loop? Write its Syntax with example. **(3 Times)**

Ans: For Loop

For loop executes one or more statements for a specified number of times. This loop is also called counter-controlled loop. It is the most flexible loop. All the contents are written in single line in this loop. That is why the most programmers use this loop in programs.

Syntax

```
For (initialization; condition; increment/decrement)
{
Statement 1;
Statement 2;
:
Statement N;
}
```

2. Differentiate between Counter and Conditional loop.

Ans:

Counter loop	Conditional loop
In counter loop, statements are executed to a fix no. of a value. That value is known as counter value. Suppose a statement is executed for 5 times. 5 is a counter value.	In conditional loop, statements execution depends upon a specific condition. Suppose a loop will terminate if user enters -1.

3. Trace the output of the following:

```
void main( )
{
Int a, s;
s= 0;
for (a=1; a<=50;a+=3)
s = s +a;
printf("Sum = %d",s);
getch ( );
}
```

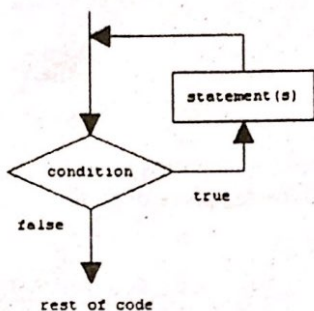
Ans: 52

4. Define sentinel control loop.

Ans: A type of loop in which execution of loop is depend on the sentinel value. This type of loop depends on special value known as sentinel value. Sentinel value indicates that the loop should continue or terminate. For example, a loop may

execute while the value of a variable is not -1. Here -1 is the sentinel value that is used to terminate loop.

5. Draw a flowchart of while loop. (2 Times)

Ans:

6. What is output of the following code:

```
void main (void)
{
int n= 1;
while (n< =5)
{
printf("Pakistan");
n=1+1;
}.
getch ( );
}
```

Ans: Pakistan, Pakistan, Pakistan, Pakistan, Pakistan.

7. Define go to statement.

Ans: The go to statement is used to perform an unconditional transfer of control to a named label. The label must be in the same function. A label is meaningful only to a go to statement. The general form of go to statement is as follows:

Go to label;

8. Define nested loop. (2 Times)

Ans: A loop within a loop is called nested loop. In nested loops, the inner loop is executed completely with each change in the valued of counter variable of outer loop. Any loop can be used as inner loop of another loop.

9. Trace the output of the following code:

```
void main ( )
{
int x,y=5;
for (x=0;x<3;x++)
if (y>=5)
print f ("%d",x);
}
```

Ans: 012 mean 0 1 2

10. Trace error

```
int x=5;
int y
y=x+3
printf("%d",y);
```

Ans: 2 error.

1. int y should terminate with semicolon.
2. Y=x+3 should also terminate with semicolon.

11. Trace error:

```
Include<STDIO.H>
VOID Main ();
{
printf("Pakistan");
}
```

Ans: 3 errors

1. STDIO.H should be in small letters.
2. VOID Main should be like this void main.
3. Void main() should not terminated by semicolon.

12. Predict the output of the following piece of code:

```
int =1;
while (i<=5)
{
printf ("Pakistan");
I++;
}
```

Ans: Pakistan Pakistan Pakistan Pakistan Pakistan.

13. Write the syntax of while loop, both for single statement and for multiple statement.

Ans: For single statement:

```
While (condition)
Statement;
```

For multiple statements:

```
While (condition)
{
Statement 1;
Statement 2;
.

Statement N;
}
```

14. Predict the output from the following code

```
int n;
clrscr ( );
for (n=5;n>=1; n- -)
prinff("%d",n);
getch ( );
```

Ans: 5 4 3 2 1

15. Write output **(2 Times)**

```
Int x=5, y=3;
do
{
x=x*2;
y=y+2;
}
while (y<7) ;
prinff("%d",x);
```

Ans: 20

16. What is the output of following code?

```
int x=10;
for(x=8;x>=1;x--)
printf("%d/n",x)
```

Ans: 8
7
6

5
4
3
2
1

7. **Write the output of following Code**

```
int x;
for (x=0; x>0; x++)
print f ("%d/n",x);
```

Ans: This loop will show nothing because x=0 and condition will true when x>0. Condition is false.

8. **Convert following loop code into while loop code:** **(2 Times)**

```
for (i=10;i>0; i--)
{
printf("i=%d", i);
}
```

Ans:
```
int i=10;
while(i>0)
{
printf("i=%d", i);
i++;
}
```

9. **Trace output**

```
intl,j=10;
for (i=1;i<=5; i++)
{
prinf("\nPakistan");
}
```

Ans: Pakistan
Pakistan
Pakistan
Pakistan
Pakistan.

0. **Convert the following code into while loop:** **(2 Times)**

```
for (int i=1; i<10; i++)
{
printf("/nPakistan");
}
```

Ans:
```
int i=1;
while(i<10)
{
   printf("/nPakistan");
        I++;
}
```

. **Trace the output of the following:**

```
int k= 0;
while (k < =5)
{
printf ("OK");
k++;
}
```

Ans: okokokokok

. **for (i=1,i<=5;i++)**
printf("/n%d", i); Re-write the above program segment using while loop.

Ans:
```
int i=1;
while (i<=5)
```

```
{
printf ("/n%d",i);
i++;
}
```

23. **Two uses and advantages of loop.**
i) It is time saving. There is no need to repeat statements again and again.
ii) Program length becomes shorter by using loop.

24. **Convert into do-while loop?**

```
for(int n=1;n<=10;n++)
{
 printf("%d",n);
}
```

Ans.

```
int n = 1;
do
{
 printf("%d",n);
 n++;
}
While (n <= 10);
```

25. **Why sentinel value is used in loop?** **(2 Times)**
Ans. Sentinel value is used to control the iterations of loop. If we will not use sentir value then loop iterations will be infinite.

26. **Define while loop?**
Ans. While loop is used to repeat a statement or block of statement until giv condition is true.
Syntax:

```
initialization;
While (condition)
{
        Statement;
            /
        Increment/decrement;
}
```

27. **Differentiate between break and continue statement in loops?**
Ans. <u>Break</u> statement is used to terminate the execution of code. Where break is use that block of code terminate it execution and control comes out of that block.
<u>Continue</u> is used to move the control the beginning of loop body. Until condition true.

28. **What is continue statement?** **(2 Times)**
Ans. Continue statement is used to move the control to the beginning of loop un condition is true.

29. **Convert into do while ....**
for (i=1; i<=5; i++)
printf("\n%d",i);

Ans.

```
# include <stdio.h>
void main ( )
{
int    i = 1;
do
{
printf (%d \n", i);
i++;
}
while (i < 5);
```

. **Convert following code into while loop?**

```
for (int j= 1; j<=4;j++)
{
printf("%d", j);
}
```

ns.

```
int  j = 1;
while(j <= 4)
{
Printf("%d", j);
j++;
}
```

. **Define post-test loop.** **(2 Times)**

ns. It is a type of loop in which the condition is checked after executing the body of the loop. It means that the statement in the loop will be executed at least once.

. **Determine the output.**

```
Int i=1;
While (i<10)
{
printf("%d",i++);
}
```

ns. 1 2 3 4 5 6 7 8 9

3. ***Write the output of the following code:*** **(2 Times)**

```
int I,j=3;
for (i=1; i<5; i++)
printf("\n%d%d" ,i,j);
```

ns. 13
23
33
43
53

4. **What is meant by loop?**

ns. A statement or number of statement that are executed repeatedly is known as a loop. They are used to access a sequence of values.

5. **Determine the output.**

```
int x=0;
for (x=1;x<15;x++)
{
printf("%d\n",x*x);
x++;
}
```

ns. 1
4
25
45
81
121
169
225

6. **Convert the following for loop into while loop *+//++**

```
int a=0;
for (a=10;a>=1;a-)
{
printf("%d",a);
printf("\n");
a=2;
}
```

37. Define sentinel values.

Ans. A special value used to terminate a sentinel controlled loop is called sentinel valu This value is used in loops when the number of repetition is not predefined.

38. Find output from following code.

```
int I,j=0;
for(I=1;I<5;++I)
{
  printf("%d%d",I,j);
}
```

Ans. 10203040.

39. Write the output of the following code

```
void main()
{int I;
for(I=1;I<=3;I++)
print f ("%d",I*I);
}
```

Ans. 1
4
9

40. Define infinite loop. **(2 Times)**

Ans. A loop in which the ending condition never occurs is called infinite loop. It repea forever until the user intervenes to stop the loop.

41. Write the output of the following code.

```
int m=5;
while (m<10)
{
printf("%d\n",m);
m=m+2;
}
```

Ans. 5
7
9

42. Covert the following code into while loop:

```
int n=5 , f=1;
for (I=1;I<n;I++)
f=f*I;
```

Ans.

```
{
int n=5, f=1;
int I=1
do
{printf("%d",f) ;
I++;
f=f*I;
}
while (I<=n);
}
```

43. What is counter controlled loop? **(4 Times)**

Ans. The counter controlled loop depends on the value of a variable known as counte variable. The value of counter variable is incremented or decremented each tim the body of loop executes. The loop terminates when value of counter variabl reaches a particular value.

44. Write output of the following code.

```
int x;
for (x=0;x<5;x++)
printf("%d",x);
```

Ans. 0 1 2 3 4

45. Define For-loop.

Ans: For loop executes one or more statements for a specified number of times. This loop is also called counter-controlled loop. It is the most flexible loop. That is why the most programmers use this loop in programs.

46. Convert following while loop into for loop:

```
int c = 0;
while (c<5)
{
printf ("%d\n", c);
c++;
}
```

Ans:

```
for (int c = 0; c<5; c++)
    printf ("%d\n", c);
```

47. Determine the output:

```
for (a = 5; a<=5; a=a+5)
printf ("%d", a);
```

Ans: 5

48. What is the output of following piece of code?

```
for (k = 0; k>=0; k++)
printf ("%d\n", k);
```

Ans: 0
1
2....... infinite loop

49. Determine the output:

```
int n= 1;
do {
printf ("%d\n", n);
n++;
}
while (n<=5);
```

Ans: 1
2
3
4
5

50. Find the error:

```
void main ()
{
Far (int n=1; n<=5, n++)
Printf ("%d", n);
}
```

Ans: i) The word "Far" in the third line must replace with "for"
ii) The semicolon must write in third line after condition instead of comma

51. What will be the output of the following?

```
int c= 1;
do {
printf ("%d", c);
}
while (c++ <=4);
```

Ans: 1 2 3 4 5

52. Convert the following code in "while" loop:

```
for (int i = 3; i<=9; i+=3)
printf ("\t %d", i);
```

Ans:

```
int i = 3;
while (i<=9)
{
```

```
printf ("\t %d", i);
i=i+3;
}
```

53. What will be the output of the following?

```
char c = 'A';
do
{
printf ("%c", c);
c=c+2;
}
while (c<= 'I');
```

Ans: A C E G I

LONG QUESTIONS OF CHAPTER-12 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. What is nested loop? Give its syntax. Explain its working with an example. (2 Times)
2. Define "for" loop. Write its syntax, Draw flow chart and explain its working with the help of example. (3 Times)
3. Write a program that display first five numbers and their sum using while loop.
4. Write a program which prints natural numbers from 1 to 100.

OBJECTIVES (MCQ'S) OF CHAPTER-13 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. Functions that are the part of language are called:
(A) intrinsic (B) built in function (C)language defined (D)all these

2. Print f ( ) is a: **(2 Times)**
(A) built in function (B) user defined function (C) local function (D) keyword

3. Memory is allocated to a local variable at the time of its **(2 Times)**
(A) declaration (B) destruction (C) definition (D) first reference

4. Local variables are called: **(2 Times)**
(A) Normal (B)Automatic (C) global (D) none

5. Global Variable are created in **(6 Times)**
(A) ROM (B) cache (C) RAM (D) hard disk

6. The first line of function definition is known as :
(A) Function body (B)Function call (C) Function arguments (D) Function header

7. Multiple arguments passed to a function are separated by: **(3 Times)**
(A) period (B) colon (C) comma (D) semicolon

C-LANGUAGE

8. Function prototype for built in function are specified in:
(A) source files (B) header files (C) object files (D)image files

9. Which of the following is type of function available in C language:
(A) User-defined (B) Built-in (C)Subprogram (D)Both a and b

10. Another name for built-in function is:
(A) User-defined function (B) Library function
(C) Arithmetic function (D) Both a and b

11. A type of function that is available as part of language is known as:
(A) User-defined function (B) Library
(C) Sub-program (D) Both a and b

12. The statement that activates a function is known as:
(a) Function design (b) Function definition (c) Function declaration (d) Function call

C-LANGUAGE

13. gets ( ) function takes__________parameters.
(a) 1 (b) 2 (c) 3 (d) 4 **(13 times)**

14. **The first line of user defined function definition is:**
(a) function argument (b) function prototype (c) function header (d) function calling **(13 times)**

15. **Function declaration is also known as function..........**
(a) Definition (b) Header (c) Prototype (d) Parameters **(3 times)**

16. **Which statement is used by function to return a value?**
(a) give (b) send (c) return (d) call **(13 times)**

17. **A type of function written by the programmer is known as:**
(a) User-defined (b) Subprograms (c) Subroutines (d) Built-in-function

18. **A value that can be sent to a function is known as:-**
(a) Return value (b) Automatic variable (c) Indicator (d) Argument

19. **What is the variable that is used by function to receive an argument:**
(a) expression (b) parameter (c) constant (d) function

20. **Formal arguments are also called:**
(a) Actual arguments (b) Dummy arguments (c) Original arguments (d) Referenced arguments

21. **A function does not return any value has return type:**
(a) nothing (b) float (c) void (d) int

22. **The scope of variable refers to its:**
(a) Length (b) Name (c) Accessibility (d) Data type

23. **The process of sending an argument to a function is called:**
(a) Sending (b) Filtering (c) Delivering (d) Passing

24. **The parameters in function declaration:**
(a) actual parameters (b) formal parameters
(c) returned parameters (d) call parameters

25. **The statement that activates a function is known as:**
(a) Function Output (b) Function Definition
(c) Function Prototype (d) Function Call

ANSWERS

1	2	3	4	5	6	7	8	9	10	11	12	13
B	A	A	B	C	D	C	B	D	B	B	D	A
14	15	16	17	18	19	20	21	22	23	24	25	
C	C	C	A	D	B	B	C	C	D	B	D	

SHORT QUESTIONS OF CHAPTER-13 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. **What is Function Proto Type?** **(6 Times)**

Ans: Function declaration is a model of a function. It is also known s function prototype. It provides information to compiler about eh structure of the function to be used in program. It consists of function name, function type and number and types of parameters. Syntax Return type function name (parameters);

2. **List the different types of Functions.** **(2 Times)**

Ans: C language provides the following types of functions:

i. User-defined Functions
ii. Built-in function.

3. Compare Local and Global variable. **(2 Times)**

Ans:

Local variable	Global variable
Local variables are declared inside a function. Local variable is created when the control enters the function	Global variables are declared outside any function. Global variable is created when the program starts.

4. What is the life Time of Global variable?

Ans: Global variables exist in the memory as long as the program is running. These variables are destroyed from the memory when the program terminates. These variables occupy memory longer than local variables.

5. What is function call statement? **(3 Times)**

Ans: The statement that activates a function is known as function call. A function is called with its name. Function name is followed by necessary parameters in parentheses. If there are many parameters, these are separated by commas.

6. How a function returns value? **(2 Times)**

Ans: A function can return a single value. The return type in function declaration indicates the type of value returned by a function. The keyword return is used to return the value back to the calling function.

7. How does a function make programming easier?

Ans: A lengthy program can be divided into small functions. It is easier to write small functions instead of writing a long program. A programmer can focus the attention on a specific problem. It makes programming easier.

8. Describe built in function.

Ans: A type of function that is available as a part of language is known as built-in function or library function. These functions are ready made programs. These functions are stored in different header files. Built-in functions make programming faster and easier.

9. What is the life time of local variable?

Ans: The time period for which a variable exists in the memory is known as the lifetime of variable. The lifetime of local variable starts when control enters the function in which it is declared. Local variable is automatically destroyed when control exists from the function in which locally variable is created.

10. List some benefits of using function.

Ans:
i. Easier to modify.
ii. Easier to maintain & debug.
iii. Reusability.
iv. Easier to code.

11. Define the term Function?

Ans: A function is a named block of code that performs some actions. The statements written inside the functions are executed when it is called by its name. Each function has unique name. Functions are the building block of C. They perform a specific operations according to code written inside the function.

12. Differentiate between Function Definition and Function Declaration. **(2 Times)**

Ans:

Function definition	Function declaration
A set of statements that explains what a function does is called function definition. A function definition can be written in following places: 1. Before main () 2. After main () 3. In a separate file	Function declaration is a model of a function. It is also known s function prototype. It provides information to compiler about eh structure of the function to be used in program. It consists of function name, function type and number and types of parameters. Syntax Return type function name (parameters);

13. **Define function body.** **(2 times)**
Ans: The set of statements which are executed inside the function is known as function body. The body of function appears after function header. The statements are written in curly braces {}.

14. **Define local variable.** **(3 times)**
Ans: A variable declared inside a function is called a local variable. Local variables are called automatic variables. The syntax of declaring a local variable is as follows;
auto data type identifier;

15. **What is function definition?** **(2 Times)**
Ans: A set of statements that explains what a function does is called function definition. A function definition can be written in following places:
1. Before main () 2. After main () 3. In a separate file

16. **What is lifetime of a variable?**
Ans: The time period for which a variable exists in the memory is known as lifetime of the variable. Different types of the variables have different life times. Local variables have lifetime when control centers in the function and exist from that function. While global variable will remain in memory until program executes.

17. **Define local variables and their scope?**
Ans. The variables that are declared inside a function are known as local variables. The scope of these variables are inside the function in which they are declared. They only can be accessed in their respected function.

18. **What is function header?**
Ans. The first line of a function, in which return type, function name and arguments are given is known as function header. i-e.
return_type funct_name (arguments)

19. **Use of parameters in function.**
Ans. Parameters are the values that are passed to a function to process the function process those values and return result to main ( ).

20. **Which type of functions are the part of language?**
Ans. Built-in or predefined functions are the part of languages.
i-e.

```
getch ( );
clrscr ( );
```

21. **Write down the scope of global variables?**
Ans. Global variables can be accessed or used all over the program. It means that these variables are globally accessed from any part of the programme. Normally, global variables are declared before main function.

22. **Why is function used in program?** **(2 Times)**
Ans: The real reason of using functions is to divide a program into different parts. These parts of a program can be managed easily.

23. **What is return statement?**
Ans: The return statement terminates the execution of a function and returns control to the calling function. A return statement can also return a value to the calling function.

24. **Convert the following code into do while loop.**

```
int n=1;
while (n<=7)
{
printf("*n");
n++;
}
```

Ans:

```
{ int n=1;
do
{
printf("*/n"),
n++;
```

```
}
while (n<=7);
}
```

25. Write errors from the following code.

```
#include
void main ()
}
float y=3.14
if(Y==3.14)
prin f ("%d",Y)
}
```

Ans: i. # include is wrong. The correct structure is #include<stdio.h>
iii. Semicolon is missing after float y =3.14
iv. There is semicolon missing after printf ("%d",y)
v. Write y instead of Y.

26. Define user defined function. **(3 Times)**

Ans: A type of function written by the programmer is known as user defined function. It has a unique name. these functions are written according to the user requirements.

27. What is meant by scope of variable?

Ans: The area where a variable can be accessed is known as scope of variable. Variable scope refers to the accessibility of a variable in a given program or function. It is very useful to be able to limit a variable's scope to a single function.

28. Give an example of user defined and built-in function?

Ans: The examples of user defined functions are SUM ().and COMPARE (). The examples of built-in functions are scanf () and getch ().

29. Define global variable?

Ans: A variable declared outside any function is known as global variable. Global variables can be used by all functions in the program. The values of these variables are shared among different functions. If one function changes the value of a global variable this change is also available to other functions.

OBJECTIVES (MCQ'S) OF CHAPTER-14
ACCORDING TO ALP SMART SYLLABUS 2020-21

1. A binary stream is sequence of:
(A) bits (B)bytes (C)kilobytes (D)giga bytes

2. Which of the following is used to write a string to a file? **(4 times)**
(A) puts ( ) (B) put c ( ) (C) f puts ( ) (D) f gets ( )

3. Which of the following functions is used to write a character to a file? **(3 Times)**
(A) fputc ( ) (B)putc ( ) (C)fputs ( ) (D) fgets ( )

4. Which mode opens only an existing file for both reading and writing? **(4 times)**
(A) "W" (B) "W++" (C) "r+" (D) "a+"

5. In __________ file opening mode, data can only be read from an existing file:
(A) W (B) W+ (C) r+ (D) "r"

6. In text file data is stored in:
(A) ASCII Code (B) Binary code (C) octal code (D) text code

7. __________ are file handling functions:
(A) f print f (B) f scan f (C) both a and b (D) none of these

8. A file is stored in
(A) RAM (B) Hard disk (C) ROM (D) Cache

9. An array script should be:
(A) int (B) float (C) double (D) An array

C-language

10. **A sequence of characters from an input device to computer is called: (14 times)**
(a) Input stream (b) Text stream (c) Binary stream (d) Out put

11. **A__________ can store text only.** **(14times)**
(a) binary file (b) text file (c) exe file (d) object file

12. **In the Statement FILE *FP, the * represents to:** **(2 times)**
(a) pointer (b) variable (c) multiplication (d) parameter

13. **Global variables are created in**
(a) RAM (b) ROM (c) Hard Disk (d) Cache

14. **A built-in function:**
(a) cannot be redefined (b) can be redefined (c) exit do (d) end while

15. **The fopen( ) function uses __________ parameters:**
(a) 1 (b) 4 (c) 3 (d) 2

16. **Which mode opens only an existing file for both reading and writing?**
(a) "r+" (b) 'w' (c) "w+" (d) "a"

17. **On successfully closing a file in C, the fclose ( ) returns:**
(a) 0 (zero) (b) NULL (c) 1 (ONE) (d) File pointer

18. **On Successfully closing a file, the fclose ( ) returns:**
(a) 0 (Zero) (b) NULL (c) 1 (One) (d) FILE Pointer

ANSWERS

1	2	3	4	5	6	7	8	9	10
B	C	B	C	D	A	C	B	A	B
11	12	13	14	15	16	17	18		
B	A	A	A	A	A	A	A		

SHORT QUESTIONS OF CHAPTER-14 ACCORDING TO ALP SMART SYLLABUS 2020-21

1. **Define EOF marker. OR How is end of Text file indicated?** **(3 times)**

Ans: A text file is a named collection of characters saved in secondary storage such as disk. The text file has no fixed size. A special end-of-file character is used to indicate the end of a text file. It is placed after the last character in the file. It is denoted by EOF in C language.

2 **What is Text File?**

Ans: A type of file that stores data as readable and printable character is called text file. A source program of C language is an example of text file. The user can easily view and read the contents of a text file. It can also be printed to get a hard copy.

3. **Compare Binary and text stream.** **(2 times)**

Ans:

Binary Stream	Text Stream
A binary stream is a sequence of bytes with a one-to-one correspondence to those on the external device (i.e., no translation occurs). The number of bytes written or read is the same as the number on the external device. Binary stream can be used to transfer any type of data.	A text stream is a sequence of characters. In a text stream, certain character translation may occur (e.g., newline may be converted to a carriage return/line-feed pair). This means that there may not be a one-to-one relationship between the characters written and those in the external device.

4. **Define a pointer.**

Ans: A type of variable that is used to store the memory address of a memory cell is known as pointer. It normally stores the memory address of a variable or object. The data type of a pointer must be the same as data type of the variable whose memory address is stored in it.

5. **What is binary stream?** **(2 times)**

Ans: A binary stream is a sequence of bytes. The translation is not performed in binary stream. It exists with one-to-one correspondence to the external devices. It

means that the number of bytes written or read is the same as the number of bytes on the external device.

6. Which access method can access the data directly? **(2 times)**

Ans: Random access method is used to access any data directly without accessing the preceding data. It does not read or write data in sequence. It is very fast access method as compared to sequential search method.

7. Which function is used to close a file in C language? **(2 times)**

Ans: A file is closed by using function fclose(). The syntax of this function is fclose(file_pointer).

8. Write the use of New Line Marker.

Ans: the ENTER key is used to move the cursor to the next line in a text editor such as notepad. A new line character is placed at the end of each line when the user presses ENTER key. The new line is denoted by \n in C.

9. What is the use of Data File?

Ans: Data file can be used to provide the input to a program. It can also be used to store the output of the program permanently. If a program will get input from a file in place of keyboard, it will get the same data each time it is executed. There will be less chance of data loss.

10. What do you mean by text stream?

Ans: A text stream is a sequence of characters. A certain character translation may occur in a text stream. For example a new line may be converted to a carriage return / line feed pair.

11. Describe the purpose of file handling?

Ans. A file can be used to provide input to a program. It can also be used to store the output of the program permanently. If the input is given by file so there is less chances of errors.

12. Why it is important to close a file? **(2 times)**

Ans. When the file is closed, the file pointer is also destroyed in the memory. The file becomes inaccessible. Closing file is automatic process, if file is not closed, operating system will automatically close it.

13. List any two ways to write text data?

Ans.
i) Data can be write character by character. i-e. "fputc" function is used for this.
ii) Data can be written in file as a string. i-e. "fputs" is used for this purpose.

14. List two types of streams used in files?

Ans. **i)** Text stream **ii)** Binary streams.

15. Define a stream. **(2 times)**

Ans: A logical interface to a file is known as stream. A stream is associated with a file using an open operation. The stream is disassociated from a file using a close operation.

16. List three names of functions used for character input.

Ans:
i. scanf()
ii. getch ( )
iii. getche()

17. How a file opened in C?

Ans: A file pointer is declared and associated with the file to be opened. A function fopen is used to open a file.

Syntax:

File_pointer =fopen (file_name, mode);

18. What is a file pointer?

Ans: File pointer is a pointer that refers to a file on the secondary storage. It is a variable of type FILE that is defined in stdio.h. It is used to access and manipulate a data file. The file pointer is associated with a file after declaration.

19. How is a file closed? **(2 times)**

Ans: An open file is closed by using the fclose() function. The syntax of this function is fclose (file_pointer).
Where file_pointer is the file pointer that refers to the file to be closed.

20. What is meant by fgets function?

Ans: Data can be read from text file as string at a time by using fgets function. Its syntax is as follows:
fgets (string, File Pointer);